ERTEC
ENVIRONMENTAL RESOURCE TECHNOLOGIES

October 30, 2015

Certified Mail: 7004-2510-0004-6647-4187

Mr. Adalberto Bosque
Project Manager
U.S. Environmental Protection Agency
City View Plaza II Building, 7th Floor, Suite 7000
#48 Rd. 165 Km. 1.2
Guaynabo, PR 00968-8069

Re: Semi-annual Monitoring Progress Report April to September 2015 – Water Purification System Operation and Maintenance, Administrative Order Index No. II CERCLA 90301 Pfizer Pharmaceuticals LLC (Former Pharmacia & Upjohn), Arecibo, Puerto Rico

Dear Mr. Bosque:

On behalf of Pfizer Pharmaceuticals LLC (former Pharmacia & Upjohn), ERTEC, PSC – Environmental Consultants (ERTEC) is submitting the Semi-annual Monitoring Progress Report corresponding to the Water Purification System Operation and Maintenance activities performed from April to September 2015. The progress report was prepared in accordance with the requirements set forth in Paragraph 59 of the referenced Administrative Consent Order.

If you need additional information, please call us at your convenience.

Cordially,

José G. Agrelot, MSCE, PE
Project Director

Enclosures

cc: Mr. Weldin Ortíz, PREQB, (Certified Mail: 7004-2510-0004-6647-4194)
Ms. Amarilis Rodríguez, PREQB (via electronic mail)
Mr. Melvin Hauptman, USEPA Region 2 (via electronic mail)
Ms. Diana Cutt, USEPA Region 2 (via electronic mail)
Mr. William G. Gierke, Pfizer Global Engineering - Pfizer, Inc.

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SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

PREPARED FOR:

US ENVIRONMENTAL PROTECTION AGENCY
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OCTOBER 30, 2015

PREPARED BY:

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SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

Date Prepared: October 30, 2015

Period Covered: April 1 to September 30, 2015

Project: Pfizer Pharmaceuticals LLC (former Pharmacia & Upjohn), Tank Farm Incident, Arecibo, Puerto Rico, Administrative Order Index No. II CERCLA 90301

Prepared by: José C. Agrelot, PE, MSCE
Project Officer

1.0 WORK PERFORMED DURING APRIL TO SEPTEMBER 2015

The following activities were completed during this period:

1.1 Monthly Monitoring of Groundwater Extraction and Treatment System

Monthly monitoring of the groundwater extraction and treatment system included the following activities:

- Pressure and water flow readings of extraction wells UE-1 and UE-2 on a daily basis during working days (Monday thru Friday) by CH2MHill.

The total volume of treated water in gallons per day including system shutdown periods is included in **Appendix 1** from April to September 2015.

1.2 Quarterly Monitoring and Sampling of Groundwater Extraction and Treatment System

Quarterly monitoring and sampling of the groundwater extraction and treatment system performed by ERTEC, PSC-Environmental Consultants (ERTEC) on June 2015 included the following activities:

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Tel. (787) 792-8902 • Fax (787) 783-5555

- Sampling of aeration tower influent (AT-IN) for carbon tetrachloride (CCl_4), hardness and alkalinity. Sampling activities included field measurements of pH, temperature, conductivity and dissolved oxygen (DO).

- Sampling of aeration tower effluent (AT-OUT) and extraction wells UE-1 and UE-2 for CCl_4. Sampling activities included field measurements of pH, temperature, conductivity and DO.

1.3 Semi-annual Monitoring and Sampling of Groundwater Extraction and Treatment System

Semi-annual monitoring and sampling of the groundwater extraction and treatment system performed by ERTEC on September 2015 included the following activities:

- Sampling of aeration tower influent (AT-IN) for CCl_4, hardness and alkalinity. Sampling activities included field measurements of pH, temperature, conductivity and DO.

- Sampling of aeration tower effluent (AT-OUT), extraction wells UE-1 and UE-2, and monitoring wells MW-1, MW-6, MW-9, MW-12, MW-17, MW-18, MW-301B, and MW-302 for CCl_4. Sampling activities included field measurements of pH, temperature, conductivity and DO.

- Water levels from extraction wells UE-1 and UE-2, and monitoring wells AHR, MW-1, MW-6, MW-8, MW-9, MW-10, MW-12, MW-17, MW-301B and MW-302. No water level was obtained from inactive production well Merck Well (no reading was obtained at this well after various attempts) and monitoring well MW-16 (due to no access to well area).

Groundwater samples collected during quarterly and semi-annual sampling events were analyzed for CCl_4 following SW846 Method 8260B. Samples were analyzed by Test America laboratories of South Burlington, Vermont.

Water samples from the aeration tower influent during June and September 2015 were collected and analyzed for hardness and alkalinity following method SM 2340B and EPA Method 310.2, respectively. Samples were analyzed by Environmental Quality Laboratories in Bayamón, Puerto Rico. Proper Chain-of-Custody documentation accompanied the samples to the laboratory. Copy of the Chain-of-Custodies is included in **Appendix 2**.

Analytical results were validated by Eden Environmental, Inc. of Baton Rouge, Louisiana, following EPA Region II Standard Operating Procedure (HW-24, Revision 2) for Validation of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) SW-846 Method 8260B. A copy of the data validation reports for June and September 2015 sampling events are included in **Appendix 3**.

1.4 Problems Encountered/Solutions

The following shutdown or interruptions were registered during this period:

- Extraction wells UE-1 and UE-2 were shutdown from May 13, 2015 to May 28, 2015 as part of the EPA-approved Step #3 (No Pumping) of Step-Down Pumping Reduction Test activities. Operation of extraction well UE-1 was resumed on May 28, 2015 at 250 gpm until Variable Frequency Drive (VFD) was replaced at UE-2. Extraction well UE-2 was back in operation on June 11, 2015. Wells extraction rates were set at 150 gpm in UE-1 and 100 gpm in UE-2 for a combined pumping rate of 250 gpm.

Pumping and treatment system shutdowns or interruptions (e.g. due to power failures) during this reporting period are summarized in **Appendix 1**.

2.0 SAMPLING AND TEST DATA

The following sections present a summary of sampling and field monitoring data obtained during the monthly and quarterly sampling events:

2.1 Quarterly Groundwater Sampling and Test Data

Quarterly groundwater samples from extraction wells UE-1 and UE-2, aeration tower influent (AT-IN) and effluent (AT-OUT) were collected on June 2015. CCl_4 concentrations from quarterly event as measured in groundwater samples collected during the June 2015 event are summarized in **Table 1**.

Water samples from the aeration tower influent (AT-IN) were collected for analysis of hardness and alkalinity on June 29, 2015. Copy of the analytical results is included in **Appendix 4**.

Field measurements of pH, temperature, conductivity and DO for groundwater samples collected during the June 2015 quarterly sampling event are summarized in **Table 2**.

2.2 Semi-annual Groundwater Sampling and Test Data

Semi-annual groundwater samples from extraction wells UE-1 and UE-2, aeration tower influent (AT-IN) and effluent (AT-OUT) and monitoring wells MW-1, MW-6, MW-9, MW-12, MW-17, MW-18, MW-301B, and MW-302 were collected on September 23, 24 and 25, 2015. CCl_4, acetone, chloroform and methylene chloride concentrations from semi-annual event as measured in groundwater samples collected during September 2015 are summarized in **Table 3**. A groundwater CCl_4 concentration plume diagram for September 2015 is included in **Figure 1**.

Water samples from the aeration tower influent (AT-IN) were collected for analysis of hardness and alkalinity on September 23, 2015. Copies of the analytical results are included in **Appendix 4**.

Field measurements of pH, temperature, conductivity and DO for groundwater samples collected during the semi-annual sampling event are summarized in **Table 4**.

Graphs depicting CCl_4 concentrations versus time prepared for each well where a sufficient historical record of detectable concentrations and current data is available are included in **Appendix 5**. Such wells include MW-1, MW-18, MW-301B, MW-302, UE-1, and UE-2. Graphs depicting CCl_4 concentrations versus time for the influent (AT-IN) and effluent (AT-OUT) of the aeration tower treatment system are also included in **Appendix 5**.

2.3 Water Level Data

Water level data from extraction and monitoring wells for September 2015 is summarized in **Table 5**. **Figure 2** presents a groundwater contour map for September 2015 semi-annual sampling and monitoring activities.

2.4 Historical Groundwater Data

Data summary tables of CCl_4 concentrations from January 1998 through September 2015 as measured in groundwater samples collected from extraction, production and monitoring wells are included in **Appendix 6**.

3.0 PUMPING (EXTRACTION) SUMMARY

The following table presents a summary of monthly volume extraction and CCl_4 extraction in pounds per month for each extraction well (UE-1 and UE-2) during June and September 2015 sampling events.

Wells	UE-1			UE-2		
Month	Extraction Volume (gal/mo)	CCl_4 (ug/L)	CCl_4 Extraction (lbs)	Extraction Volume (gal/mo)	CCl_4 (ug/L)	CCl_4 Extraction (lbs)
June 2015[1/]	7,991,200	13	0.87	2,943,500	8.1	0.20
September 2015[1/]	6,505,700	12	0.65	4,457,800	5.5	0.20

Notes:
Gal/mo gallons per month
ug/L Micrograms per liter
lbs pounds
1/ Extraction rates: UE-1 at 150 gpm and UE-2 at 100 gpm.

A summary table of CCl_4 extraction in pounds per month since year 2010 is included in **Appendix 7**.

4.0 MONITORING AND SAMPLING SCHEDULE

The next quarterly sampling event will be performed in December 2015. Quarterly samples will be obtained from extraction wells UE-1 and UE-2 and aeration tower influent (AT-IN) and effluent (AT-OUT).

The next semi-annual event will be performed on March 2016. Semi-annual samples will be obtained from extraction wells UE-1 and UE-2 and aeration tower influent (AT-IN) and effluent (AT-OUT) and monitoring wells MW-1, MW-6, MW-9, MW-12, MW-17, MW-18, MW-301B and MW-302.

A round of water levels including Merck Well, UE-1, UE-2, AHR, MW-1, MW-6, MW-8, MW-9, MW-10, MW-12, MW-16, MW-17, MW-301B, and MW-302 will be performed during semi-annual monitoring and sampling activities.

5.0 SHORT-TERM PUMPING/STEP-REDUCTION TEST

Results of the step-down pumping reduction tests performed between October 2014 and June 2015 are summarized in the Step-Down Pumping Reduction Test Summary Report submitted to EPA under separate cover along with this Semi-Annual Monitoring Progress Report.

FIGURES

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

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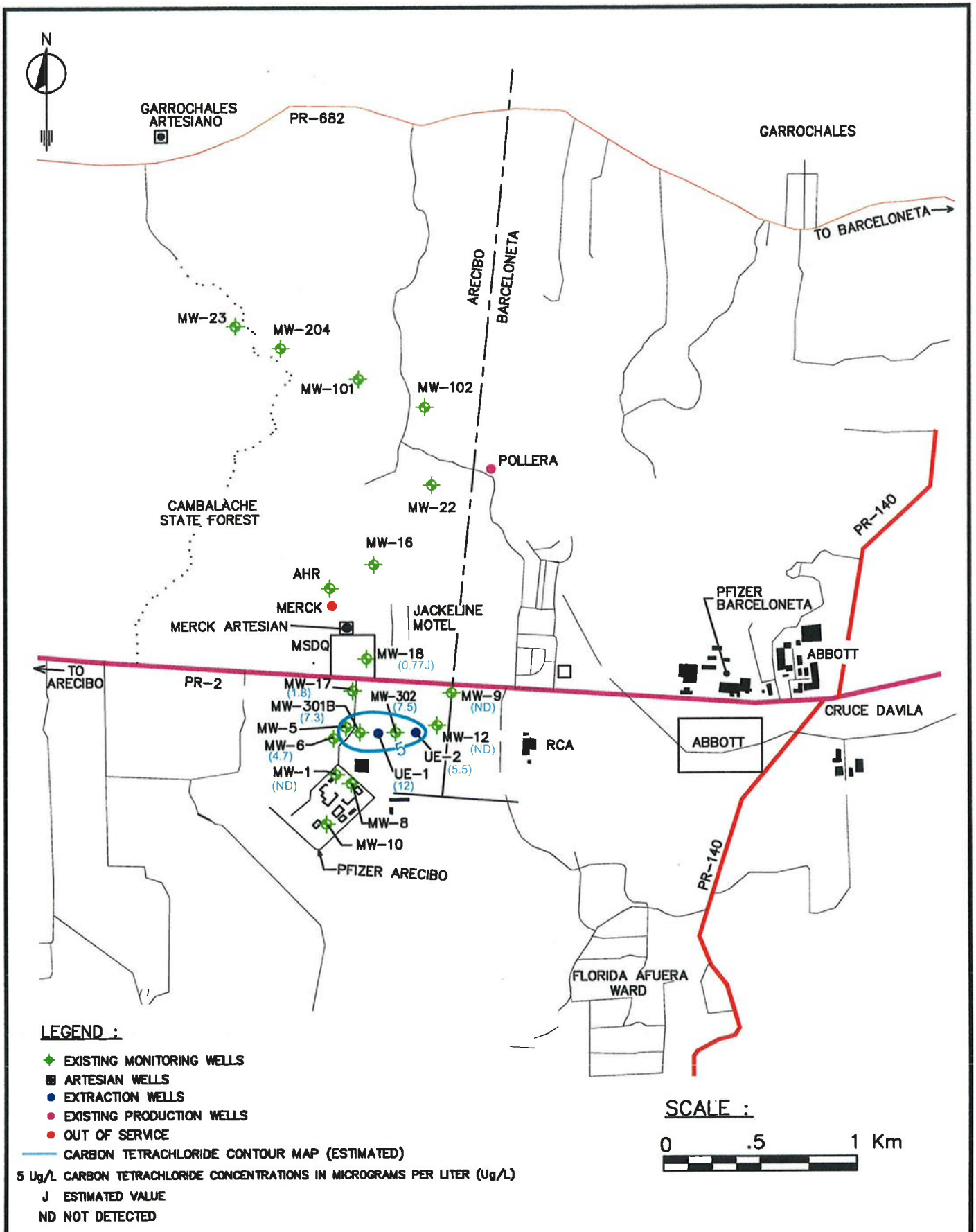

SCALE: GS	FIGURE 1 - CARBON TETRACHLORIDE CONCENTRATIONS SEPTEMBER 2015 PFIZER PHARMACEUTICALS LLC ARECIBO, PUERTO RICO
REV: WIM	
FILE: TETRA SEP 2015	
DRAWN BY: EGN	
JOB: E155384	

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PLANT NORTH
TRUE NORTH
5
6
7
MW-9
(4.34 ft.)
MW-12
(6.05 ft.)
MW-10
(7.85 ft.)
MW-8
(6.64 ft.)
MW-1
(5.02 ft.)
MW-302
UE-2
UE-1
UJ-5
MW-301B
(6.42 ft.)
MW-6
(6.11 ft.)
MW-5
MW-17
(5.82 ft.)
MW-11
MW-18
MERCK ARTESIAN
MERCK
AHR
(5.44 ft.)
MW-16
UJ-3
UJ-4
TO SAN JUAN
STATE ROAD PR. NO.2
MSDQ FACILITY FORMER AH ROBINS
TO ARECIBO
MAIN STREET
ACCESS ROAD
PAVED ROAD
MAIN ENTRANCE STATION
ENTRACE SECURITY STATION
PARKING
RUNOFF RETENTION
BASIN
SINKHOLE AREA
FIVE INJECTION WELLS
SEE DETAIL A
N-66
N-67 DIESEL TANK FOR EMERGENCY GENERATOR
N-68
LANDSCAPING
M-67
M-74
FIRE TANK
M-85
M-90
M-86
M-71
M.H.-11
M.H.-9
M.H.-12
M-65-A
M-65
M-61
M-60
GREEN AREA
TRAILER
M-78
M-20
M-92
M-80
M-72
M-70
M-10
FUEL OIL FB-701
FUEL STORAGE AREA DIESEL OIL TANK
COOLING TOWER
M-73
PUMP & TREAT SYSTEM
ELECTRICAL SUBSTATION
DIRT ROAD
P.R. ELECTRICAL POWER AUTHORITY EASMENT
PROPERTY LINE
3,300.00
STREET
GRAVEL
GREEN AREA
SIDEWALK
CONCRETE STRUCTURE
VMW-3C
VMW-2
VMW-1
SVE
SVE-1
LEGEND:
SVE SYSTEM AREA
DETAIL A
LEGEND
ARTESIAN PRODUCTION WELL
SHALLOW PRODUCTION WELL
GROUNDWATER MONITORING WELL
DISCHARGE OF TREATED WATER TO SINKHOLE RECHARGE AREA
PIPE LINE FROM UE-1 AND UE-2 TO SURGE TANK & AERATION TOWER TREATMENT SYSTEM
M.H. MANHOLES
PROPERTY LINE
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FIGURE 2 – GROUNDWATER CONTOUR MAP SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC.
ARECIBO, PUERTO RICO

SCALE: 1: 2,000	DWG. BY: EGN	REV.: W.M.	FILE: GW CONTOUR SEPT 2015	JOB: E155384

TABLES

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

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TABLE 1

CARBON TETRACHLORIDE CONCENTRATIONS IN QUARTERLY SAMPLES – JUNE 2015
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

Sample ID	Date (day-mo-yr)	Carbon Tetrachloride (ug/L)
UE-1	29-Jun-15	**13**
MW-A[1/]	29-Jun-15	**13**
UE-2	29-Jun-15	**8.1**
AT-IN	29-Jun-15	**9.4**
AT-OUT	29-Jun-15	**2.0**
TB-062915	29-Jun-15	1.0U

Notes:
ug/L Micrograms per liter.
[1/] Field blind duplicate of sample UE-1.
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
Analytical results reported by Test America Burlington following EPA SW-846 Method 8260B.

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TABLE 2

FIELD MEASUREMENTS QUARTERLY SAMPLES – JUNE 2015
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

SAMPLE ID	DATE	pH	TEMPERATURE (^{O}C)	SPECIFIC CONDUCTANCE (uS/cm)	DISSOLVED OXYGEN (mg/L)
UE-1	29-Jun-15	7.90	29.4	590	1.82
UE-2	29-Jun-15	8.03	28.1	620	8.00
AT-IN	29-Jun-15	7.40	28.0	600	7.82
AT-OUT	29-Jun-15	7.35	27.3	610	7.90

Notes:
^{0}C Degrees Celsius.
uS/cm Microsiemens per centimeter.
Mg/L Milligrams per liter.

TABLE 3

ACETONE, METHYLENE CHLORIDE, CHLOROFORM AND CARBON TETRACHLORIDE CONCENTRATIONS IN SEMI-ANNUAL SAMPLES - SEPTEMBER 2015
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

Well ID	Date (day-mo-yr)	Acetone (ug/L)	Methylene chloride (ug/L)	Chloroform (ug/L)	Carbon tetrachloride (ug/L)
UE-1	23-Sept-15	5.0U	1.0U	**9.4**	**12**
UE-2	23-Sept-15	5.0U	1.0U	**4.4**	**5.5**
AT-IN	23-Sept-15	5.0U	1.0U	**7.6**	**9.6**
AT-OUT	23-Sept-15	5.0U	1.0U	1.0U	1.0U
TB092315	23-Sept-15	5.0U	1.0U	1.0U	1.0U
MW-1	24-Sept-15	5.0U	1.0U	**21**	1.0U
MW-A[1/]	24-Sept-15	5.0U	1.0U	**21**	**0.23J**
MW-6	24-Sept-15	5.0U	1.0U	4.2U	**4.7**
MW-9	24-Sept-15	5.0U	1.0U	1.0U	1.0U
MW-B[2/]	24-Sept-15	5.0U	1.0U	1.0U	1.0U
MW-12	24-Sept-15	5.0U	1.0U	1.0U	1.0U
MW-17	24-Sept-15	5.0U	1.0U	2.8U	**1.8**
MW-18	24-Sept-15	5.0U	1.0U	1.0U	**0.77J**
EB092415[3/]	24-Sept-15	5.0U	1.0U	**2.4**	1.0U
TB092415	24-Sept-15	5.0U	1.0U	1.0U	1.0U
MW-301B	25-Sept-15	5.0U	1.0U	**6.6**	**7.3**
MW-302	25-Sept-15	5.0U	1.0U	**5.0**	**7.5**
EB092515[3/]	25-Sept-15	5.0U	1.0U	**4.2**	1.0U
TB092515	25-Sept-15	5.0U	1.0U	1.0U	1.0U

Notes:
1/ Field blind duplicate of sample MW-1.
2/ Field blind duplicate of sample MW-9.
3/ Equipment blank of stainless steel syringe.
ug/L Micrograms per liter.
ND Not detected.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
Analytical results reported by Test America Burlington following EPA SW-846 Method 8260B.

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TABLE 4

FIELD MEASUREMENTS SEMI-ANNUAL SAMPLES - SEPTEMBER 2015
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

Well ID	Date (day-mo-yr)	Temperature (°C)	Ph	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)
UE-1	23-Sept-15	24.7	7.09	610	3.82
UE-2	23-Sept-15	24.8	7.01	620	3.60
AT-IN	23-Sept-15	26.6	7.42	620	4.50
AT-OUT	23-Sept-15	25.6	7.49	600	4.36
MW-1	24-Sept-15	25.0	7.04	650	3.74
MW-6	24-Sept-15	25.8	7.60	570	3.88
MW-9	24-Sept-15	27.2	7.23	700	4.42
MW-12	24-Sept-15	27.3	7.25	830	4.23
MW-17	24-Sept-15	27.9	7.48	570	4.94
MW-18	24-Sept-15	28.1	7.46	480	4.29
MW-301B	25-Sept-15	27.9	7.43	610	4.00
MW-302	25-Sept-15	28.0	7.51	670	3.65

Notes:
°C Degrees Celsius.
uS/cm Microsiemens per centimeter.
Mg/L Milligrams per liter.

TABLE 5

WATER LEVEL DATA SEPTEMBER 2015
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID	DATE (day-mo-yr)	MEASURING POINT ELEVATION (feet)	WATER LEVEL DEPTH (feet)	PUMP ON WATER LEVEL (feet)	WATER LEVEL ELEVATION (feet)
UE-1	23-Sept-15	1/	1/	303.40	1/
UE-2	23-Sept-15	310.01	1/	304.73	1/
MW-1	23-Sept-15	311.53	306.51		5.02
MW-6	23-Sept-15	290.81	284.70		6.11
MW-8	23-Sept-15	314.05	307.41		6.64
MW-9	23-Sept-15	303.55	299.21		4.34
MW-10	23-Sept-15	313.88	306.03		7.85
MW-12	23-Sept-15	301.11	295.06		6.05
MW-16	23-Sept-15	321.14	1/		
MW-17	23-Sept-15	303.29	297.47		5.82
MW-301B	23-Sept-15	307.57	301.15		6.42
MW-302	23-Sept-15	308.30	1/		
AHR	23-Sept-15	312.44	307.00		5.44
Merck Well	23-Sept-15	314.14	1/	2/	

Notes:
1/ Not available.
2/ Production well out of service.

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APPENDIX 1

EXTRACTION WELLS UE-1 AND UE-2 PRESSURE AND WATER FLOW MEASUREMENTS – APRIL TO SEPTEMBER 2015

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

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PFIZER ARECIBO

Month: April 2015

	UE-1				UE-2			
Date	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment
1	8	472,700.00			8	467,400.00		
2	8	424,000.00			8	419,000.00		
3	8	424,000.00			8	419,000.00		
4	8	449,800.00			8	444,400.00		
5	8	449,700.00			8	444,400.00		
6	8	427,800.00			8	426,500.00		
7	8	427,500.00			8	426,300.00		
8	8	428,200.00			8	426,500.00		
9	8	437,800.00			8	437,800.00		
10	8	436,900.00			8	434,400.00		
11	8	437,000.00			8	434,700.00		
12	8	436,800.00			8	434,000.00		
13	8	417,400.00			8	413,100.00		
14	8	453,800.00			8	448,300.00		
15	8	437,300.00			8	431,300.00		
16	8	437,200.00			8	431,200.00		
17	8	426,900.00			8	427,400.00		
18	8	426,900.00			8	427,100.00		
19	8	426,500.00			8	427,500.00		
20	8	426,400.00			8	427,400.00		
21	8	438,900.00			8	441,000.00		
22	8	438,500.00			8	440,500.00		
23	8	439,200.00			8	441,600.00		
24	8	430,900.00			8	432,000.00		
25	8	431,000.00			8	431,800.00		
26	8	430,900.00			8	432,000.00		
27	8	428,500.00			8	428,000.00		
28	8	428,700.00			8	428,000.00		
29	8	428,000.00			8	427,400.00		
30	8	434,500.00			8	433,300.00		
Corrected Total		13,033,700.00	0			12,983,300.00	0	

Comments:
The gallons per day were adjusted using Flow totalizer readings.
PLC and Flow totalizer are now syncronize.
***Power Outage from PREPA.*

Signature: Domingo Gonzalez Domingo Gonzalez Date: 5-04-2015

PFIZER ARECIBO

Month: May 2015

	UE-1				UE-2			
Date	**PSI**	**Gallons/Day**	**Downtime (hrs)**	**Downtime Comment**	**PSI**	**Gallons/Day**	**Downtime (hrs)**	**Downtime Comment**
1	8	427,800.00			8	427,500.00		
2	8	428,500.00			8	428,200.00		
3	8	428,800.00			8	428,500.00		
4	8	432,300.00			8	432,500.00		
5	8	431,500.00			8	431,900.00		
6	8	432,800.00			8	433,400.00		
7	8	434,500.00			8	433,200.00		
8	8	433,600.00			8	434,700.00		
9	8	432,800.00			8	431,400.00		
10	8	433,400.00			8	431,100.00		
11	8	432,500.00			8	432,700.00		
12	8	445,900.00			8	433,300.00		
13	8	64,700.00	20	*Reduction Test.*	8	62,000.00	20	*Reduction Test.*
14	8		24	*Reduction Test.*	8		24	*Reduction Test.*
15	8		24	*Reduction Test.*	8		24	*Reduction Test.*
16	8		24	*Reduction Test.*	8		24	*Reduction Test.*
17	8		24	*Reduction Test.*	8		24	*Reduction Test.*
18	8		24	*Reduction Test.*	8		24	*Reduction Test.*
19	8		24	*Reduction Test.*	8		24	*Reduction Test.*
20	8		24	*Reduction Test.*	8		24	*Reduction Test.*
21	8		24	*Reduction Test.*	8		24	*Reduction Test.*
22	8		24	*Reduction Test.*	8		24	*Reduction Test.*
23	8		24	*Reduction Test.*	8		24	*Reduction Test.*
24	8		24	*Reduction Test.*	8		24	*Reduction Test.*
25	8		24	*Reduction Test.*	8		24	*Reduction Test.*
26	8		24	*Reduction Test.*	8		24	*Reduction Test.*
27	8		24	*Reduction Test.*	8		24	*VFD Problem*
28	8	307,200.00	0		8		24	*VFD Problem*
29	8	365,200.00	0		8		24	*VFD Problem*
30	8	368,500.00	0		8		24	*VFD Problem*
31	8	392,700.00	0		8		24	*VFD Problem*
Corrected Total		6,692,700.00	356			5,240,400.00	452	

Comments:
The gallons per day were adjusted using Flow totalizer readings.
PLC and Flow totalizer are now syncronize.
***Down timeUE#2 only Power Surge.*
** Power Out (low Voltage)*

Signature: Domingo Gonzalez

Domingo Gonzalez

Date: 6-01-2015

PFIZER ARECIBO

Month: June **2015**

	UE-1				UE-2			
Date	**PSI**	**Gallons/Day**	**Downtime (hrs)**	**Downtime Comment**	**PSI**	**Gallons/Day**	**Downtime (hrs)**	**Downtime Comment**
1	8	355,100.00			8	-	24	*VFD Downtime*
2	8	355,400.00			8	-	24	*VFD Downtime*
3	8	368,400.00			8	-	24	*VFD Downtime*
4	8	355,000.00			8	-	24	*VFD Downtime*
5	8	354,800.00			8	-	24	*VFD Downtime*
6	8	355,200.00			8	-	24	*VFD Downtime*
7	8	354,200.00			8	-	24	*VFD Downtime*
8	8	360,800.00			8	-	24	*VFD Downtime*
9	8	361,800.00			8	-	24	*VFD Downtime*
10	8	356,700.00			8	6,000.00	24	*VFD Downtime*
11	8	200,600.00	3	*VFD Change*	8	135,700.00	3	*VFD Downtime*
12	8	222,500.00			8	153,000.00		
13	8	226,700.00			8	151,500.00		
14	8	223,600.00			8	151,200.00		
15	8	229,000.00			8	155,100.00		
16	8	221,000.00			8	147,500.00		
17	8	221,000.00			8	147,000.00		
18	8	226,100.00			8	150,100.00		
19	8	218,100.00			8	144,300.00		
20	8	218,300.00			8	144,500.00		
21	8	217,900.00			8	144,700.00		
22	8	222,500.00			8	146,800.00		
23	8	222,900.00			8	147,100.00		
24	8	221,700.00			8	146,500.00		
25	8	220,900.00			8	146,100.00		
26	8	224,600.00			8	148,200.00		
27	8	224,500.00			8	148,000.00		
28	8	224,900.00			8	149,000.00		
29	8	206,000.00			8	136,000.00		
30	8	221,000.00			8	145,200.00		
Corrected Total		7,991,200.00	3			2,943,500.00	243	

Comments:
The gallons per day were adjusted using Flow totalizer readings.
PLC and Flow totalizer are now syncronize.
***Power Outage from PREPA.*

Signature: Domingo Gonzalez Domingo Gonzalez Date: July-2-2015.

PFIZER ARECIBO

Month: July **2015**

	UE-1				UE-2			
Date	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment
1	8	221,000.00			8	145,200.00		
2	8	223,100.00			8	146,300.00		
3	8	223,300.00			8	146,500.00		
4	8	223,200.00			8	146,400.00		
5	8	223,600.00			8	146,500.00		
6	8	217,900.00			8	142,600.00		
7	8	217,400.00			8	142,100.00		
8	8	217,500.00			8	145,800.00		
9	8	218,000.00			8	145,700.00		
10	8	218,200.00			8	146,000.00		
11	8	217,500.00			8	145,200.00		
12	8	217,700.00			8	145,800.00		
13	8	218,100.00			8	146,100.00		
14	8	216,900.00			8	146,500.00		
15	8	216,500.00			8	142,100.00		
16	8	198,200.00			8	143,000.00		
17	8	201,500.00			8	142,700.00		
18	8	203,200.00			8	142,900.00		
19	8	204,300.00			8	142,600.00		
20	8	202,500.00			8	145,000.00		
21	8	208,200.00			8	148,600.00		
22	8	204,100.00			8	153,800.00		
23	8	217,000.00			8	148,500.00		
24	8	216,800.00			8	149,000.00		
25	8	216,500.00			8	147,700.00		
26	8	217,700.00			8	150,200.00		
27	8	216,900.00			8	147,700.00		
28	8	216,400.00			8	148,400.00		
29	8	216,300.00			8	149,200.00		
30	8	216,200.00			8	147,500.00		
31	8	216,100.00			8	148,700.00		
Corrected Total		6,661,800.00	0			4,534,300.00	0	

Comments:
The gallons per day were adjusted using Flow totalizer readings.
PLC and Flow totalizer are now syncronize.
***Down timeUE#2 only Power Surge.*
** Power Out (low Voltage)*

Signature: Domingo Gonzalez Domingo Gonzalez Date: 8-3-2015

PFIZER ARECIBO

Month: August 2015

	UE-1				UE-2			
Date	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment
1	8	216,500.00			8	149,200.00		
2	8	216,700.00			8	145,800.00		
3	8	214,500.00			8	147,700.00		
4	8	231,000.00			8	159,200.00		
5	8	204,800.00			8	141,100.00		
6	8	217,300.00			8	149,500.00		
7	8	219,400.00			8	151,200.00		
8	8	218,500.00			8	150,300.00		
9	8	217,400.00			8	150,700.00		
10	8	217,300.00			8	149,500.00		
11	8	216,800.00			8	149,900.00		
12	8	220,000.00			8	151,700.00		
13	8	210,300.00			8	150,200.00		
14	8	216,800.00			8	152,100.00		
15	8	215,800.00			8	151,500.00		
16	8	217,200.00			8	151,900.00		
17	8	222,000.00			8	140,900.00		
18	8	216,100.00			8	148,900.00		
19	8	216,000.00			8	149,200.00		
20	8	215,700.00			8	148,200.00		
21	8	216,100.00			8	149,000.00		
22	8	215,900.00			8	148,800.00		
23	8	216,200.00			8	148,700.00		
24	8	216,000.00			8	148,800.00		
25	8	215,900.00			8	148,600.00		
26	8	216,100.00			8	148,800.00		
27	8	223,100.00			8	153,500.00		
28	8	222,900.00			8	154,200.00		
29	8	223,400.00			8	153,900.00		
30	8	223,800.00			8	152,700.00		
31	8	207,200.00			8	142,400.00		
Corrected Total		6,736,700.00	0			4,638,100.00	0	

Comments:

The gallons per day were adjusted using Flow totalizer readings.

PLC and Flow totalizer are now syncronize.

***Down timeUE#2 only Power Surge.*

** Power Out (low Voltage)*

Signature: Domingo Gonzalez Domingo Gonzalez Date: 10-8-2015

PFIZER ARECIBO

Month: September 2015

	UE-1				UE-2			
Date	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment	PSI	Gallons/Day	Downtime (hrs)	Downtime Comment
1	8	216,400.00			8	148,200.00		
2	8	215,800.00			8	148,200.00		
3	8	212,800.00			8	146,000.00		
4	8	217,100.00			8	148,700.00		
5	8	217,100.00			8	148,700.00		
6	8	217,100.00			8	148,700.00		
7	8	217,100.00			8	148,700.00		
8	8	217,100.00			8	148,700.00		
9	8	217,100.00			8	148,700.00		
10	8	217,100.00			8	148,700.00		
11	8	217,500.00			8	149,000.00		
12	8	217,500.00			8	149,000.00		
13	8	216,900.00			8	149,500.00		
14	8	213,100.00			8	146,000.00		
15	8	218,100.00			8	149,400.00		
16	8	221,700.00			8	151,800.00		
17	8	218,300.00			8	149,200.00		
18	8	218,500.00			8	149,300.00		
19	8	218,100.00			8	149,500.00		
20	8	218,000.00			8	149,000.00		
21	8	213,300.00			8	145,900.00		
22	8	213,400.00			8	146,000.00		
23	8	199,000.00			8	136,600.00		
24	8	238,400.00			8	163,900.00		
25	8	215,100.00			8	147,900.00		
26	8	215,000.00			8	148,100.00		
27	8	215,200.00			8	147,900.00		
28	8	228,100.00			8	155,800.00		
29	8	210,100.00			8	143,600.00		
30	8	215,700.00			8	147,100.00		
Corrected Total		6,505,700.00	0			4,457,800.00	0	

Comments:
The gallons per day were adjusted using Flow totalizer readings.
PLC and Flow totalizer are now syncronize.
***Power Outage from PREPA.*

Signature: Domingo Gonzalez

Domingo Gonzalez

Date: 10-8-2015.

APPENDIX 2

COPY OF CHAIN OF CUSTODY

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

ERTEC

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802.660.1990 fax 802.660.1919

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc.

Client Contact
Wanda Morales
ERTEC, PSC → Rio Piedras
Amur St. 4-5 Rpto. Landrau, PR 00928
(787) 792-8902 Phone
(787) 983-5555 FAX
Project Name: Pfizer Arecibo TEI
Site: Arecibo, PR
JOB # 14-5289

Project Manager: Wanda Morales
Tel/Fax: (787) 792-8902
Site Contact: Wanda Morales
Lab Contact: Don Pawlowski
Date: 06/29/15
Carrier: FedEX

COC No: 1 of 1 COCs
Sampler: Roberto De Jesús
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Analysis Turnaround Time: ☑ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below ____
☑ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC's	Sample Specific Notes
TB062915	062915	/	G	W	2	N	N	X	
UE-1	062915	1115	G	W	3	N	N	X	
MW-A	062915	1119	G	W	3	N	N	X	
UE-2	062915	1132	G	W	3	N	N	X	
AT-IN	062915	1145	G	W	3	N	Y	X	
AT-IN-MS	062915	1145	G	W	3	N	Y	X	
AT-IN-MSD	062915	1145	G	W	3	N	Y	X	
AT-OUT	062915	1200	G	W	3	N	N	X	

RJB 06/29/15

RJB 06/29/15

200-28671 Chain of Custody

Preservation Used: 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are ... nth)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments: Level 4. standard (14 days)

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ___ Corr'd: ___ | Therm ID No.: ___

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Roberto De Jesús / [signature]	ERTEC, PSC	06/29/15 @1600	FedEx	FedEX	06/29/15 @ 1600
			[signature]	TABTV	6/30/15 1230
			Received in Laboratory by:		

...IRC ...NTA ...JALI ABC ...ORIE ...IC.

2015-00053

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: ERTEC | CLIENT ID: 567-01 | W.O. #: 28 | SITE: ROAD # 2, ARECIBO | CLIENT REP: MRS. WANDA MORALES

P.O. #: 11346 | PWSID #: | FOLDER #: 209026 | PROJECT: PFIZER ARECIBO | EQLAB REP: EGARCIA

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: 2384941-1 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 06/29/15 TIME: 1145 TYPE: Grab	TYPE: P/PC COLOR: N/A VOLUME: 500 PRESERVATIVE: Cool 4 °C		Alkalinity
SAMPLE #: 2384941-2 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 06/29/15 TIME: 1145 TYPE: Grab	TYPE: P/PC COLOR: N/A VOLUME: 300 PRESERVATIVE: HNO3 pH<2		Hardness - Total, ICP Total Metals: Ca, Mg.
SAMPLE #: MATRIX: SOURCE:	DATE: TIME: TYPE:	TYPE: COLOR: VOLUME: PRESERVATIVE:		
SAMPLE #: MATRIX: SOURCE: RAB 06/29/15	DATE: TIME: TYPE:	TYPE: COLOR: VOLUME: PRESERVATIVE:		

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	Roberto De Jesus/ERTEC	06/29/15	1145
Fixed in field by:	Roberto De Jesus/ERTEC	06/29/15	1145
Authorized by:			
Received by EQLF:			
Released to EQLL by:	~~Roberto~~ ERTEC	06/29/15	1440
Received by EQLL:		06/29/15	1440

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

Arrival Temperature: 3.0°C Signature:

Eqlab's general terms and conditions on reverse side of this document.

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802.660.1990 fax 802.660.1919

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		
Entec		
Ave. A-5 ... Carolina		
Las Piedras, PR 00921		
(787) 763-8903	Phone	
(787) 783-5555	FAX	
Project Name: Pfizer Arecibo TFI		
Site: Pfizer Arecibo		
P O #		

Project Manager: Wanda Morales
Tel/Fax: (787) 763-8903 / (787) 783-5555
Site Contact: Wanda Morales
Lab Contact: Jim Dawski
Date: 9/13/14
Carrier: FX

Analysis Turnaround Time
☐ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below ____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

COC No: 2 of 2 COCs
Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	8260B (CC-4 Methylene chloride, Chloroform)	Sample Specific Notes:
TB 092315	9/23/15	X	G	W	2	N	N	X	Samples collected on 9/23/15, preserved on Ice and secured until Shipment on 9/24/15
AT - IN	9/23/15	1430	G	W	3	N	N	X	
AT - OUT	9/23/15	1435	G	W	3	N	N	X	
UE-2	9/23/15	1530	G	W	3	N	N	X	
UE-1	9/23/15	1540	G	W	3	N	N	X	
UE-1 (MS)	9/23/15	1540	G	W	3	N	N	X	
UE-1 MSD	9/23/15	1540	G	W	3	N	N	X	

JCK

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Entec	9/24/15 1600	[signature]	FedEx	9/24/15 1600
Relinquished by:	Company:	Date/Time:	Received by: [signature]	Company: TABU	Date/Time: 9/25/15 1030
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

2015-0920

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: ERTEC | CLIENT ID: 567-01 | W.O. #: 28 | SITE: ROAD # 2, ARECIBO | CLIENT REP: MRS. WANDA MORALES

O. #: 11346 | PWSID #: | FOLDER #: 212325 | PROJECT: PFIZER ARECIBO | EQLAB REP: EGARCIA

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #2426513-1 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 9/23/15 TIME: 1430 TYPE: Grab	TYPE: P/PC; COLOR: N/A; VOLUME: 500 PRESERVATIVE: Cool 4 °C		Alkalinity
SAMPLE #2426513-2 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 9/23/15 TIME: 1430 TYPE: Grab	TYPE: P/PC; COLOR: N/A; VOLUME: 500 PRESERVATIVE: HNO3 pH<2		Hardness - Total, ICP Total Metals: Ca, Mg
SAMPLE #: MATRIX: SOURCE:	DATE: TIME: TYPE:	TYPE; COLOR; VOLUME PRESERVATIVE		
SAMPLE #: MATRIX: SOURCE:	DATE: TIME: TYPE:	TYPE; COLOR; VOLUME PRESERVATIVE		

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	Jose L Rivera	9/23/15	1430
Fixed in field by:	Jose L Rivera	9/23/15	1430
Authorized by:			
Received by EQLF:			
Released to EQLL by:	Jose L Rivera	9/23/15	1636
Received by EQLL:	Hugo Davis	09/23/15	1636

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

Arrival Temperature: 4.0°C Signature: LHR

Eqlab's general terms and conditions on reverse side of this document.

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802.660.1990 fax 802.660.1919

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact
Eetec
Project Name: Pfizer Arecibo TFI
Site: Pfizer Arecibo
P O #

Project Manager: Wanda Mesaliz
Site Contact: Wanda Mesaliz
Date: 9/24/15
Lab Contact: Jon Jawicki
Carrier:
COC No: 1 of 3 COCs
Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	8260	Sample Specific Notes
TB 092415	9/24/15	X	G	W	2	N	N	X	
EB 092415	9/24/15	0805	G	W	3	N	N	X	
MW-1	9/24/15	0840	G	W	3	N	N	X	
MW-A	9/24/15	0843	G	W	3	N	N	X	
MW-6	9/24/15	0920	G	W	3	N	N	X	
MW-9	9/24/15	1005	G	W	3	N	N	X	
MW-B	9/24/15	1108	G	W	3	N	N	X	
MW-12	9/24/15	1130	G	W	3	N	N	X	
MW-17	9/24/15	1300	G	W	3	N	N	X	

200-29982 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Eetec	9/24/15 1600	FedEx	FedEx	9/24/15 1600
Relinquished by:	Company:	Date/Time:	Received by: [signature]	Company: TABTV	Date/Time: 9/25/15 1030
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802.660.1990 fax 802.660.1919

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact
Extio
Ave. A.S. Repto Landrau
Rio Piedras PR 00921
(787) 782-8902 Phone
(787) 783-5555 FAX
Project Name: Pfizer Arecibo TFI
Site:
P O #

Project Manager: Wanda Morales
Tel/Fax: (787) 782-8902 (787) 783-5555
Site Contact: Wanda Morales
Lab Contact: Jim Dziwicki
Date: 9/25/15
Carrier:

COC No: 1 of 1 COCs
Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Analysis Turnaround Time
☐ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below ______
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	8011 224-4 (Acetone, Methyl chloride, Chloroform)	Sample Specific Notes:
TB 092515	9/25/15	X	G	W	2	N	N	X	
MW-18	9/25/15	0820	G	W	3	N	N	X	
EB 092515	9/25/15	0945	G	W	3	N	N	X	
MW-301B	9/25/15	0920	G	W	3	N	N	X	
MW-302	9/25/15	1002	G	W	3	N	N	X	

200-29984 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ______ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temp. (°C): Obs'd: ______ Corr'd: ______ Therm ID No.: ______

	Company	Date/Time		Company	Date/Time
Relinquished by: [signature]	Extio	9/25/15 1600	Received by: Fedex	Fedex	9/25/15 1600
Relinquished by:	Company:	Date/Time:	Received by: [signature]	TABTV	9/26/15 0920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

APPENDIX 3

DATA VALIDATION REPORTS JUNE AND SEPTEMBER 2015 SAMPLING EVENTS

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

ERTEC

Eden Environmental, LLC

August 3, 2015

Ms. Wanda Morales
ERTEC
Amur St. A - #5
Reparto Landrau
Rio Piedras, PR 00921

RE: Data Validation Report for the Groundwater Monitoring of the Pfizer Arecibo Site

Dear Wanda,

Enclosed is the validation report for the groundwater samples collected on June 29, 2015, from the Pfizer Arecibo Site. The following samples were submitted to TestAmerica in Burlington, Vermont and were assigned to Sample Delivery Group (SDG) 200-28671:

AT-IN	AT-OUT	MW-A	UE-1
UE-2	TB 062915		

Due to instrument problems at TestAmerica Burlington, the samples in this SDG were sub-contracted to TestAmerica Edison in New Jersey.

The laboratory performed well, and no qualification of sample results were necessary. The validator did not add any qualifiers to the laboratory reported results.

All samples were analyzed for carbon tetrachloride using EPA SW-846 Method 8260B, and the validation effort was restricted to the reported results and supporting data for this compound.

Data validation was performed in conformance with the specifications of the EPA Region II Standard Operating Procedure (HW-24, Revision 4) for Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) SW-846 Methods 8260B and 8260C, September, 2014. When necessary, professional judgment was applied and appropriately noted in the applicable section of the enclosed report. The validation effort for these data has the label Stage 4 Validation Manual (S4VM).

Anomalies detected during the validation effort are included in the appropriate section of the enclosed report. The Laboratory Analytical Data Forms with all qualifiers resulting from the validation effort (if any were necessary) are included in Attachment A. The EPA Region II qualifiers and their definitions are included in Attachment B.

This validation report should be added to the data package for all future distributions of the carbon tetrachloride data reported in SDG 200-28671.

If you have any questions regarding this report, please give me a call at 225-355-0163 or contact me by e-mail at engrid@eden-env.com.

Kindest regards,

Engrid Carpenter

Engrid S. Carpenter
President

Eden Environmental, LLC

ANALYTICAL DATA VALIDATION

ERTEC JOB DESCRIPTION – PFIZER ARECIBO TFI

ERTEC JOB NUMBER – 14-5289

ORGANIC ANALYSIS DATA

Prepared by: TestAmerica Laboratory, Burlington Vermont
Sample Delivery Group: 200-28671
Carbon Tetrachloride in Groundwater Samples

VALIDATION REPORT

Prepared by: Eden Environmental, LLC
Project Number 13100

Date: August 3, 2015

13100/ESC/CEW
06/29/15-8260B

Eden Environmental, LLC

INTRODUCTION

Enclosed is the validation report for the groundwater samples collected on June 29, 2015, from the Pfizer Arecibo Site. The following samples were submitted to TestAmerica in Burlington, Vermont and were assigned to Sample Delivery Group (SDG) 200-28671:

AT-IN	AT-OUT	MW-A	UE-1
UE-2	TB 062915		

Due to instrument problems at TestAmerica Burlington, the samples in this SDG were subcontracted to TestAmerica Edison in New Jersey.

The laboratory performed well, and no qualifications of sample results were necessary. The validator did not add any qualifiers to the laboratory-reported results.

All samples were analyzed for carbon tetrachloride using EPA SW-846 Method 8260B, and the validation effort was restricted to the reported results and supporting data for this compound.

Data validation was performed in conformance with the specifications of the EPA Region II Standard Operating Procedure (HW-24, Revision 4) for Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) SW-846 Methods 8260B and 8260C, September, 2014. When necessary, professional judgment was applied and appropriately noted in the applicable section of the enclosed report. The validation effort for these data has the label Stage 4 Validation Manual (S4VM).

Anomalies detected during the validation effort are included in the appropriate section of this report. The Laboratory Analytical Data Forms with all qualifiers resulting from the validation effort (if any were necessary) are included in Attachment A. The EPA Region II qualifiers and their definitions are included in Attachment B.

I. Holding Times, Preservation, and Sample Integrity

The field-prepared chain of custody record indicated the use of hydrochloric acid (HCl) for chemical preservation. The pH of the sample vials used for analyses were documented on the instrument run logs as <2 standard units. All sample analyses were performed within the EPA-specified holding time of 14 days from sample collection for properly preserved water samples.

A cooler temperature of 1.6°C was recorded on laboratory receipt at TestAmerica Burlington. This temperature is below the validation guidelines of 4°C ± 2°C. Based on professional judgment, results for carbon tetrachloride would not be adversely affected by the low temperature and no action was taken. A cooler temperature of 3.1°C was recorded on receipt at TestAmerica Edison, which was acceptable.

II. GC/MS Instrument Performance Checks

Documentation for two bromofluorobenzene (BFB) instrument performance checks was included in the data package. All instrument performance check requirements were met for both BFB analyses.

III. Calibration

The samples in this SDG were analyzed by TestAmerica Edison on a single GC/MS system identified as CVOAMS10.

A. Initial Calibration (IC) and Initial Calibration Verification (ICV)

The IC established by TestAmerica Edison was performed on June 27, 2015. The IC included six concentration levels (1, 5, 20, 50, 200, and 500 µg/L). All RRF and %RSD values were within the EPA Region II-specified acceptance limits.

No ICV was included in the data package received for review. The use of an ICV constitutes a method requirement. Historically, TestAmerica Edison has included an ICV and demonstrating no problems with the IC results. Based on professional judgment, the missing ICV does not adversely affect the sample results.

B. Continuing Verification (CV)

The samples in this data set were analyzed on July 8, 2015, in association with a single CV standard, which was spiked at 20 µg/L All RRF and %RSD values were within the EPA Region II-specified acceptance limits.

IV. Blanks

A laboratory-prepared method blank (MB) was analyzed in the analytical sequence associated with the reported samples. No project-specified target analytes were detected in the MB.

A trip blank (TB 062915) wase submitted with the reported site samples. Carbon tetrachloride was not detected in TB 06-2915.

V. Surrogate Recoveries

All surrogate recoveries were within the laboratory-established acceptance limits as provided on the summary form.

VI. Spiked Analyses

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

AT-IN was prepared and analyzed as an MS/MSD pair. Carbon tetrachloride was spiked at 20 ppb. Both recoveries and the agreement between paired concentrations were within the TestAmerica Edison laboratory-established acceptance limits as included on the summary form.

B. Laboratory Control Samples (LCS)

An LCS was prepared and analyzed at the beginning of the analytical sequence containing project samples. The LCS was spiked with carbon tetrachloride at 20 µg/L. All recoveries were within the acceptance limits established by the laboratory.

VII. Duplicate Analyses

A. Laboratory Duplicate

No sample in this data set was analyzed in duplicate by the laboratory. This is not a method-requirement; therefore, no action was necessary.

B. Field Duplicate Analyses (FD)

MW-A was collected as a blind FD of UE-1. Agreement between concentrations of carbon tetrachloride [0 relative percent difference (RPD)] was acceptable (≤50 RPD EPA Region II acceptance limits).

VIII. Internal Standard Performance

The validator confirmed that the areas and retention times of all six internal standards were within the EPA-specified acceptance limits for the reported site and quality control analyses.

IX. Target Compound Identification

When detected, the target analyte was correctly identified with acceptable supporting mass spectral data present in the data package.

X. Compound Quantitation and Reporting Limits (RLs)

Sample-specific RLs and compound concentrations were correctly calculated and accurately reported. The unadjusted RLs are equivalent to the low concentration standard used to establish the IC and are supported by the data as presented.

XI. Tentatively Identified Compounds (TICs)

Library searches were not requested for these samples.

XII. Documentation

A copies of the field-prepared chain of custody record was provided in the data package. The following chain of custody issue was noted:

- The laboratory "received by" signature is illegible.

A copy of the FedEx airbill was included in the data package to document the transfer of the samples from the field to the laboratory.

A chain of custody record initiated by TestAmerica Burlington was also included in the data package. The following chain of custody issues were noted:

- All signatures are illegible.
- The Sample Receipt and Login Sheet indicated the samples were in good condition and the custody seal was intact on receipt at TestAmerica Edison.
- A cooler temperature of 3.1 °C was noted on the subcontracting chain of custody record, but "Thermal Preservation Not Required" was noted on the Sample Receipt and Login Sheet.

With regard to data documentation:

- Data for an ICV analyzed after the IC was not included in the data package. This is a method requirement and should be included for all future sampling events.

XIII. Overall Assessment

Based on the findings of the validation effort, all results were determined to be valid as reported. The validator did not apply any qualifiers to the laboratory-reported results.

This validation effort is based on the data as provided by the laboratory. Software manipulation cannot be routinely detected during validation and is outside the scope of this review.

This validation report should be added to the data package for all future distributions of the carbon tetrachloride data reported in SDG 200-28671.

Eden Environmental, LLC

ATTACHMENT A

LABORATORY ANALYTICAL DATA FORMS

Client: Ertec

Job Number: 200-28671-1
Sdg Number: 200-28671

Client Sample ID: AT-IN

Lab Sample ID: 200-28671-5
Client Matrix: Water

Date Sampled: 06/29/2015 1145
Date Received: 06/30/2015 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	460-309099	Instrument ID:	CVOAMS10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	R28055.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/08/2015 1223			Final Weight/Volume:	5 mL
Prep Date:	07/08/2015 1223				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Carbon tetrachloride	9.4		0.33	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	106		70 - 130
Toluene-d8	102		70 - 130
Bromofluorobenzene	98		64 - 135
Dibromofluoromethane (Surr)	105		72 - 137

Client: Ertec

Job Number: 200-28671-1
Sdg Number: 200-28671

Client Sample ID: **AT-OUT**

Lab Sample ID: 200-28671-6
Client Matrix: Water

Date Sampled: 06/29/2015 1200
Date Received: 06/30/2015 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	460-309099	Instrument ID:	CVOAMS10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	R28056.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/08/2015 1246			Final Weight/Volume:	5 mL
Prep Date:	07/08/2015 1246				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Carbon tetrachloride	2.0		0.33	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	105		70 - 130
Toluene-d8	100		70 - 130
Bromofluorobenzene	97		64 - 135
Dibromofluoromethane (Surr)	106		72 - 137

Client: Ertec

Job Number: 200-28671-1
Sdg Number: 200-28671

Client Sample ID: **MW-A**

Lab Sample ID: 200-28671-3
Client Matrix: Water

Date Sampled: 06/29/2015 1119
Date Received: 06/30/2015 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	460-309099	Instrument ID:	CVOAMS10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	R28053.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/08/2015 1136			Final Weight/Volume:	5 mL
Prep Date:	07/08/2015 1136				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Carbon tetrachloride	13		0.33	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	108		70 - 130
Toluene-d8	103		70 - 130
Bromofluorobenzene	101		64 - 135
Dibromofluoromethane (Surr)	107		72 - 137

Client: Ertec

Job Number: 200-28671-1
Sdg Number: 200-28671

Client Sample ID: UE-1

Lab Sample ID: 200-28671-2
Client Matrix: Water

Date Sampled: 06/29/2015 1115
Date Received: 06/30/2015 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B
Prep Method: 5030B
Dilution: 1.0
Analysis Date: 07/08/2015 1113
Prep Date: 07/08/2015 1113

Analysis Batch: 460-309099
Prep Batch: N/A

Instrument ID: CVOAMS10
Lab File ID: R28052.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Carbon tetrachloride	13		0.33	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	106		70 - 130
Toluene-d8	102		70 - 130
Bromofluorobenzene	99		64 - 135
Dibromofluoromethane (Surr)	106		72 - 137

Client: Ertec

Job Number: 200-28671-1
Sdg Number: 200-28671

Client Sample ID: UE-2

Lab Sample ID: 200-28671-4
Client Matrix: Water

Date Sampled: 06/29/2015 1132
Date Received: 06/30/2015 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	460-309099	Instrument ID:	CVOAMS10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	R28054.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/08/2015 1159			Final Weight/Volume:	5 mL
Prep Date:	07/08/2015 1159				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Carbon tetrachloride	8.1		0.33	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	109		70 - 130
Toluene-d8	100		70 - 130
Bromofluorobenzene	98		64 - 135
Dibromofluoromethane (Surr)	107		72 - 137

Client: Ertec

Job Number: 200-28671-1
Sdg Number: 200-28671

Client Sample ID: **TB062915**

Lab Sample ID: 200-28671-1
Client Matrix: Water

Date Sampled: 06/29/2015 0000
Date Received: 06/30/2015 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	460-309099	Instrument ID:	CVOAMS10
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	R28057.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/08/2015 1309			Final Weight/Volume:	5 mL
Prep Date:	07/08/2015 1309				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Carbon tetrachloride	1.0	U	0.33	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	108		70 - 130
Toluene-d8	101		70 - 130
Bromofluorobenzene	97		64 - 135
Dibromofluoromethane (Surr)	105		72 - 137

Eden Environmental, LLC

ATTACHMENT B

EPA REGION II QUALIFIERS AND THEIR DEFINITIONS

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

Eden Environmental, LLC

October 20, 2015

Ms. Wanda Morales
ERTEC
Amur St. A - #5
Reparto Landrau
Rio Piedras, PR 00921

RE: Data Validation Report for the Groundwater Monitoring of the Pfizer Arecibo Site

Dear Wanda,

Enclosed is the validation report for the groundwater samples collected on September 23, 24, and 25, 2015, from the Pfizer Arecibo Site. The following samples were submitted to TestAmerica in Burlington, Vermont and were assigned to Sample Delivery Group (SDG) 200-29982:

AT-IN	AT-OUT	MW-1	MW-6
MW-9	MW-12	MW-17	MW-18
MW-301B	MW-302	UE-1	UE-2
MW-A	MW-B	EB 092415	EB 092515
TB 092315	TB 092415	TB 092515	

The laboratory performed well, but some qualifications of sample results were necessary. Please refer to the Overall Assessment, Section XIII, for further discussion.

All samples were analyzed for acetone, methylene chloride, chloroform, and carbon tetrachloride using EPA SW-846 Method 8260B, and the validation effort was restricted to the reported results and supporting data for these compounds.

The laboratory appropriately applied "J" qualifiers to indicate estimated concentrations detected between the method detection limit (MDL) and the reporting limit (RL). The validator did not remove the "J" qualifiers.

Eden Environmental, LLC

Data validation was performed in conformance with the specifications of the EPA Region II Standard Operating Procedure (HW-24, Revision 4) for Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) SW-846 Methods 8260B and 8260C, September, 2014. When necessary, professional judgment was applied and appropriately noted in the applicable section of the enclosed report. The validation effort for these data has the label Stage 4 Validation Manual (S4VM).

Anomalies detected during the validation effort are included in the appropriate section of the enclosed report. The Laboratory Analytical Data Forms with all qualifiers resulting from the validation effort (if any were necessary) are included in Attachment A. The EPA Region II qualifiers and their definitions are included in Attachment B.

This validation report should be added to the data package for all future distributions of the carbon tetrachloride data reported in SDG 200-29982.

If you have any questions regarding this report, please give me a call at 225-355-0163 or contact me by e-mail at engrid@eden-env.com.

Kindest regards,

Engrid Carpenter

Engrid S. Carpenter
President
esc/cew

Eden Environmental, LLC

ANALYTICAL DATA VALIDATION

ERTEC JOB DESCRIPTION – PFIZER ARECIBO TFI

ERTEC JOB NUMBER – 14-5298

ORGANIC ANALYSIS DATA

Prepared by: TestAmerica Laboratory, Burlington Vermont
Sample Delivery Group: 200-29982
Acetone, Methylene Chloride, Chloroform, and Carbon Tetrachloride
in Groundwater Samples

VALIDATION REPORT

Prepared by: Eden Environmental, LLC
Project Number 13100

Date: October 20, 2015

13100/ESC/CEW
09/23-25/15-8260B

Eden Environmental, LLC

INTRODUCTION

Enclosed is the validation report for the groundwater samples collected on September 23, 24, and 25, 2015, from the Pfizer Arecibo Site. The following samples were submitted to TestAmerica in Burlington, Vermont and were assigned to Sample Delivery Group (SDG) 200-29982:

AT-IN	AT-OUT	MW-1	MW-6
MW-9	MW-12	MW-17	MW-18
MW-301B	MW-302	UE-1	UE-2
MW-A	MW-B	EB 092415	EB 092515
TB 092315	TB 092415	FB 092515	

The laboratory performed well, but some qualifications of sample results were necessary. Please refer to the Overall Assessment, Section XIII, for further discussion.

All samples were analyzed for acetone, methylene chloride, chloroform, and carbon tetrachloride using EPA SW-846 Method 8260B, and the validation effort was restricted to the reported results and supporting data for these compounds.

The laboratory appropriately applied "J" qualifiers to indicate estimated concentrations detected between the method detection limit (MDL) and the reporting limit (RL). The validator did not remove the "J" qualifiers.

Data validation was performed in conformance with the specifications of the EPA Region II Standard Operating Procedure (HW-24, Revision 4) for Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) SW-846 Methods 8260B and 8260C, September, 2014. When necessary, professional judgment was applied and appropriately noted in the applicable section of the enclosed report. The validation effort for these data has the label Stage 4 Validation Manual (S4VM).

Anomalies detected during the validation effort are included in the appropriate section of this report. The Laboratory Analytical Data Forms with all qualifiers resulting from the validation effort (if any were necessary) are included in Attachment A. The EPA Region II qualifiers and their definitions are included in Attachment B.

I. Holding Times, Preservation, and Sample Integrity

The use of hydrochloric acid (HCl) for chemical preservation was not noted on any of the three chain of custody records. However, the pH of each sample vial used for analysis was documented on the instrument run logs as 2 standard units. Sample analyses were performed within the EPA-specified holding time of 14 days from sample collection for properly preserved water samples.

The samples collected on September 23, 2015, were held on ice in a secure location and were shipped with the samples collected on September 24, 2015. The samples collected on September 25, 2015, were shipped on the day of collection. Therefore, two sample coolers were received by the laboratory for this sampling effort. A cooler temperature of 2.9^{0}C was recorded on laboratory receipt for both sample coolers, which are within the EPA validation guidelines of 4^{0}C ± 2^{0}C.

II. GC/MS Instrument Performance Checks

Documentation for five bromofluorobenzene (BFB) instrument performance checks was included in the data package. All instrument performance check requirements were met for the BFB analyses.

III. Calibration

The samples in this SDG were analyzed on a single GC/MS system identified as CHL. Manual integrations of the surrogate compound 1,2-dichloroethane-d_4 was noted in both of the low concentration continuing calibration standards. Documentation of these integrations were included in the data package and confirmed they were properly performed and incorporated into the associated quantitation report.

A. Initial Calibration (IC) and Initial Calibration Verification (ICV)

The IC was performed on September 15, 2015. This IC included six concentration levels (0.827, 1.88, 4.80, 24.8, 50, and 100 µg/L) for methylene chloride, chloroform, and carbon tetrachloride. The IC established for acetone also included six concentration levels (4.14, 9.42, 24.0, 124, 250, and 500 µg/L). All relative response factor (RRF) and percent relative standard deviation (%RSD) values for the project-specified target and surrogate compounds were within the EPA Region II-specified acceptance limits.

An ICV was analyzed on September 16, 205 at 11:52. All EPA Region II-specified acceptance criteria were met for this standard.

B. Continuing Verification (CV)

The samples in this data set were analyzed in association with three CV standards. With the exceptions of acetone in the CV analyzed on October 5, 2015 (34%) and October 8, 2015 (31%), all EPA Region II-specified acceptance criteria (≤30%) were met. Based on the failure to meet percent difference (%D) criteria, the laboratory ran a low standard CV, identified as CCVL, before any associated site samples were analyzed. Both %D values in the CCVLs (17% and 12%) were acceptable; therefore data qualification based on the unacceptable CV standards was not necessary based on professional judgment.

IV. Blanks

A laboratory-prepared method blank (MB) was analyzed in each analytical sequence associated with the reported samples. No project-specified target analytes were detected in any of the MBs.

Two equipment blanks (EB 092415 and EB 092515) and three trip blanks (TB 092315, TB 092415, and TB 092515) were submitted with the reported site samples. Chloroform was detected in EB 092415 (2.4 µg/L) and EB 092515 (4.2 µg/L). Based on contamination in the associated equipment blanks, results for chloroform in AT-OUT, MW-6, MW-9, MW-17, MW-18, and MW-B were qualified as less than the RL or less than the reported value (U), whichever was greater. Acetone, methylene chloride, and carbon tetrachloride were not detected in any of the field-submitted blanks.

V. Surrogate Recoveries

All surrogate recoveries were within the laboratory-established acceptance limits as provided on the summary forms.

VI. Spiked Analyses

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

UE-1 was prepared and analyzed as an MS/MSD pair. Acetone was spiked at 124 µg/L and the remaining three project-specified target compounds were spiked at 24.8 µg/L. All recoveries and the agreement between paired concentrations were within the laboratory-established acceptance limits as reported on the summary forms.

B. Laboratory Control Samples (LCS)

LCSs were prepared and analyzed at the beginning of each analytical sequence containing project samples. The LCSs were spiked with acetone at 124 µg/L and the three remaining project-specified target compounds were each spiked at 24.8 µg/L. All recoveries were within the acceptance limits established by the laboratory.

VII. Duplicate Analyses

A. Laboratory Duplicate

No sample in this data set was analyzed in duplicate by the laboratory. This is not a method-requirement; therefore, no action was necessary.

B. Field Duplicate Analyses (FD)

MW-A was collected as a blind FD of MW-1. Agreement between concentrations of chloroform [0 relative percent difference (RPD)] was acceptable (≤50 RPD EPA Region II acceptance limits). A low concentration of carbon tetrachloride (0.23 µg/L) was detected in MW-A, but was not reported in MW-1. A visual inspection of the chromatogram for MW-1 does include a small peak at the appropriate retention time for carbon tetrachloride; therefore, no action was taken based on professional judgment. Acetone and methylene chloride were not detected in either of these samples, and no further quantitative evaluation of precision could be made from these data.

MW-B was collected as a blind FD of MW-9. Results for chloroform in both of these samples were previously qualified based on field blank contamination and acetone, methylene chloride, and carbon tetrachloride were not detected in either of these samples. No further quantitative evaluation of precision could be made from these data.

VIII. Internal Standard Performance

The validator confirmed that the areas and retention times of all six internal standards were within the EPA-specified acceptance limits for the reported site and quality control analyses for both laboratories.

IX. Target Compound Identification

When detected, the target analyte was correctly identified with acceptable supporting mass spectral data present in the data package.

X. Compound Quantitation and Reporting Limits (RLs)

Sample-specific RLs and compound concentrations were correctly calculated and accurately reported. The unadjusted RLs are slightly higher than the low concentration standard used to establish the IC and are supported by the data as presented.

The laboratory appropriately applied "J" qualifiers to indicate estimated concentrations detected between the MDL and the RL. The validator did not remove the "J" qualifiers.

XI. Tentatively Identified Compounds (TICs)

Library searches were not requested for these samples.

XII. Documentation

Copies of the field-prepared chain of custody records were provided in the data package. The following chain of custody issues were noted:

- All "relinquished by" and "received by" signatures are illegible.
- The information regarding the temperatures of the coolers on laboratory receipt were not indicated by the laboratory on any of the chain of custody records. All of the laboratory sample receipt information was provided on the laboratory-generated Sample Receipt and Login Sheets. These documents indicated that all samples were received in good condition with the cooler custody seals intact. However, the laboratory should be instructed to complete all sections of each chain of custody record.
- The chain of custody record for the samples collected on September 23, 2015, indicate they were held in a secure location with proper physical preservation until shipment by FedEx on September 24, 2015.
- The use of hydrochloric acid to chemically preserve the samples was not noted on any of the chain of custody records. However, the pH run log indicated each vial was at pH = 2 at the time of analysis.

Two Sample Receipt and Login Sheets were included in this SDG. Both documents indicated "Refer to Job Narrative for Details Regarding Field Sampler Identification" and one document also indicated "Refer to Job Narrative Concerning Discrepancies Between Container Information and Chain of Custody Record." Neither of these issues were discussed in the Laboratory Narrative. However, the identification of the field sampler was not noted on any of the chain of custody records. No information regarding a discrepancy with a sample container and the chain of custody record was included in the data package.

Copies of the FedEx airbills were included in the data package to document the transfer of the samples from the field to the laboratory.

XIII. Overall Assessment

Findings of the validation effort resulted in the following qualifications of sample results.

- Based on contamination in the associated equipment blanks, results for chloroform in AT-OUT, MW-6, MW-9, MW-17, MW-18, and MW-B were qualified as less than the RL or less than the reported value (U), whichever was greater.

The laboratory appropriately applied "J" qualifiers to indicate estimated concentrations detected between the MDL and the RL. The validator did not remove the "J" qualifiers.

This validation effort is based on the data as provided by the laboratory. Software manipulation cannot be routinely detected during validation and is outside the scope of this review.

This validation report should be added to the data package for all future distributions of the carbon tetrachloride data reported in SDG 200-29982.

Eden Environmental, LLC

ATTACHMENT A

LABORATORY ANALYTICAL DATA FORMS

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **AT-IN**

Lab Sample ID: 200-29982-11
Client Matrix: Water

Date Sampled: 09/23/2015 1430
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95081	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16114_13.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/05/2015 1924			Final Weight/Volume:	5 mL
Prep Date:	10/05/2015 1924				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	7.6		0.20	1.0
Carbon tetrachloride	9.6		0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	108		80 - 120
Toluene-d8	100		80 - 120
Bromofluorobenzene	103		80 - 125
Dibromofluoromethane (Surr)	104		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: AT-OUT

Lab Sample ID: 200-29982-12
Client Matrix: Water

Date Sampled: 09/23/2015 1435
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95081	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16114_14.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/05/2015 1956			Final Weight/Volume:	5 mL
Prep Date:	10/05/2015 1956				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	~~0.26~~ 1.0	~~J~~ U	0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	104		80 - 120
Toluene-d8	101		80 - 120
Bromofluorobenzene	106		80 - 125
Dibromofluoromethane (Surr)	103		50 - 150

esc 10/20/15

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-1**

Lab Sample ID: 200-29982-3
Client Matrix: Water

Date Sampled: 09/24/2015 0840
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-94900	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16057_19.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/01/2015 2044			Final Weight/Volume:	5 mL
Prep Date:	10/01/2015 2044				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	21		0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	101		80 - 120
Toluene-d8	96		80 - 120
Bromofluorobenzene	101		80 - 125
Dibromofluoromethane (Surr)	100		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-6**

Lab Sample ID: 200-29982-5
Client Matrix: Water

Date Sampled: 09/24/2015 0920
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-94900	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16057_21.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/01/2015 2146			Final Weight/Volume:	5 mL
Prep Date:	10/01/2015 2146				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	4.2	U	0.20	1.0
Carbon tetrachloride	4.7		0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	102		80 - 120
Toluene-d8	98		80 - 120
Bromofluorobenzene	101		80 - 125
Dibromofluoromethane (Surr)	99		50 - 150

JSS 10/20/15

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-9**

Lab Sample ID: 200-29982-6
Client Matrix: Water

Date Sampled: 09/24/2015 1005
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-94900	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16057_22.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/01/2015 2217			Final Weight/Volume:	5 mL
Prep Date:	10/01/2015 2217				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	~~0.35~~ 1.0	~~J~~ U	0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	101		80 - 120
Toluene-d8	98		80 - 120
Bromofluorobenzene	101		80 - 125
Dibromofluoromethane (Surr)	100		50 - 150

JSW 10/20/15

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-12**

Lab Sample ID: 200-29982-8
Client Matrix: Water

Date Sampled: 09/24/2015 1120
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95081	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16114_10.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/05/2015 1750			Final Weight/Volume:	5 mL
Prep Date:	10/05/2015 1750				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	1.0	U	0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	104		80 - 120
Toluene-d8	99		80 - 120
Bromofluorobenzene	104		80 - 125
Dibromofluoromethane (Surr)	103		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-17**

Lab Sample ID: 200-29982-9
Client Matrix: Water

Date Sampled: 09/24/2015 1300
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95081	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16114_11.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/05/2015 1821			Final Weight/Volume:	5 mL
Prep Date:	10/05/2015 1821				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	2.8	U	0.20	1.0
Carbon tetrachloride	1.8		0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	104		80 - 120
Toluene-d8	101		80 - 120
Bromofluorobenzene	104		80 - 125
Dibromofluoromethane (Surr)	102		50 - 150

ssc 10/20/15

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-18**

Lab Sample ID: 200-29984-2
Client Matrix: Water

Date Sampled: 09/25/2015 0820
Date Received: 09/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95242	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16172_08.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/08/2015 1217			Final Weight/Volume:	5 mL
Prep Date:	10/08/2015 1217				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	~~0.95~~ 1.0	~~J~~ U	0.20	1.0
Carbon tetrachloride	0.77	J	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	103		80 - 120
Toluene-d8	99		80 - 120
Bromofluorobenzene	101		80 - 125
Dibromofluoromethane (Surr)	100		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-301B**

Lab Sample ID: 200-29984-4
Client Matrix: Water

Date Sampled: 09/25/2015 0920
Date Received: 09/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95242	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16172_10.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/08/2015 1320			Final Weight/Volume:	5 mL
Prep Date:	10/08/2015 1320				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	6.6		0.20	1.0
Carbon tetrachloride	7.3		0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	106		80 - 120
Toluene-d8	101		80 - 120
Bromofluorobenzene	105		80 - 125
Dibromofluoromethane (Surr)	103		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-302**

Lab Sample ID: 200-29984-5
Client Matrix: Water

Date Sampled: 09/25/2015 1002
Date Received: 09/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95242	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16172_11.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/08/2015 1352			Final Weight/Volume:	5 mL
Prep Date:	10/08/2015 1352				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	5.0		0.20	1.0
Carbon tetrachloride	7.5		0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	105		80 - 120
Toluene-d8	102		80 - 120
Bromofluorobenzene	105		80 - 125
Dibromofluoromethane (Surr)	104		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: UE-1

Lab Sample ID: 200-29982-14
Client Matrix: Water

Date Sampled: 09/23/2015 1540
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95081	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16114_16.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/05/2015 2059			Final Weight/Volume:	5 mL
Prep Date:	10/05/2015 2059				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	9.4		0.20	1.0
Carbon tetrachloride	12		0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	104		80 - 120
Toluene-d8	101		80 - 120
Bromofluorobenzene	102		80 - 125
Dibromofluoromethane (Surr)	102		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: UE-2

Lab Sample ID: 200-29982-13
Client Matrix: Water

Date Sampled: 09/23/2015 1530
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95081	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16114_15.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/05/2015 2027			Final Weight/Volume:	5 mL
Prep Date:	10/05/2015 2027				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	4.4		0.20	1.0
Carbon tetrachloride	5.5		0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	107		80 - 120
Toluene-d8	100		80 - 120
Bromofluorobenzene	104		80 - 125
Dibromofluoromethane (Surr)	105		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-A**

Lab Sample ID: 200-29982-4
Client Matrix: Water

Date Sampled: 09/24/2015 0843
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-94900	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16057_20.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/01/2015 2115			Final Weight/Volume:	5 mL
Prep Date:	10/01/2015 2115				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	21		0.20	1.0
Carbon tetrachloride	0.23	J	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	101		80 - 120
Toluene-d8	98		80 - 120
Bromofluorobenzene	100		80 - 125
Dibromofluoromethane (Surr)	102		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **MW-B**

Lab Sample ID: 200-29982-7
Client Matrix: Water

Date Sampled: 09/24/2015 1008
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-94900	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16057_23.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/01/2015 2248			Final Weight/Volume:	5 mL
Prep Date:	10/01/2015 2248				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	~~0.34~~ 1.0	~~J~~ U	0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	102		80 - 120
Toluene-d8	98		80 - 120
Bromofluorobenzene	101		80 - 125
Dibromofluoromethane (Surr)	100		50 - 150

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Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **EB092415**

Lab Sample ID: 200-29982-2EB
Client Matrix: Water

Date Sampled: 09/24/2015 0805
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-94900	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16057_18.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/01/2015 2012			Final Weight/Volume:	5 mL
Prep Date:	10/01/2015 2012				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	2.4		0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	101		80 - 120
Toluene-d8	97		80 - 120
Bromofluorobenzene	100		80 - 125
Dibromofluoromethane (Surr)	101		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **EB092515**

Lab Sample ID: 200-29984-3EB
Client Matrix: Water

Date Sampled: 09/25/2015 0905
Date Received: 09/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95242	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16172_09.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/08/2015 1249			Final Weight/Volume:	5 mL
Prep Date:	10/08/2015 1249				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	4.2		0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	108		80 - 120
Toluene-d8	101		80 - 120
Bromofluorobenzene	105		80 - 125
Dibromofluoromethane (Surr)	103		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **TB092315**

Lab Sample ID: 200-29982-10TB
Client Matrix: Water

Date Sampled: 09/23/2015 0000
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95081	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16114_12.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/05/2015 1853			Final Weight/Volume:	5 mL
Prep Date:	10/05/2015 1853				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	1.0	U	0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	108		80 - 120
Toluene-d8	102		80 - 120
Bromofluorobenzene	106		80 - 125
Dibromofluoromethane (Surr)	105		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **TB092415**

Lab Sample ID: 200-29982-1TB
Client Matrix: Water

Date Sampled: 09/24/2015 0000
Date Received: 09/25/2015 1030

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-94900	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16057_17.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/01/2015 1941			Final Weight/Volume:	5 mL
Prep Date:	10/01/2015 1941				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	1.0	U	0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	102		80 - 120
Toluene-d8	97		80 - 120
Bromofluorobenzene	100		80 - 125
Dibromofluoromethane (Surr)	101		50 - 150

Client: Ertec

Job Number: 200-29982-1
Sdg Number: 200-29982

Client Sample ID: **TB092515**

Lab Sample ID: 200-29984-1TB
Client Matrix: Water

Date Sampled: 09/25/2015 0000
Date Received: 09/26/2015 0920

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	200-95242	Instrument ID:	CHL.i
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	16172_07.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	10/08/2015 1145			Final Weight/Volume:	5 mL
Prep Date:	10/08/2015 1145				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	U	1.7	5.0
Methylene Chloride	1.0	U	0.23	1.0
Chloroform	1.0	U	0.20	1.0
Carbon tetrachloride	1.0	U	0.22	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4	109		80 - 120
Toluene-d8	103		80 - 120
Bromofluorobenzene	108		80 - 125
Dibromofluoromethane (Surr)	105		50 - 150

Eden Environmental, LLC

ATTACHMENT B

EPA REGION II QUALIFIERS AND THEIR DEFINITIONS

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

APPENDIX 4

COPY OF EQ LAB ANALYTICAL RESULTS

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

ERTEC

T ERT
P.O. BOX 195336
SAN JUAN PR 00919-5336

Attn: MRS. WANDA MORALES
Source: **AT-IN:** _____
ROAD # 2, ARECIBO

Project Name: AERATION TOWER
Facility: PFIZER ARECIBO
Description: GROUND WATER - Grab
Client Ref. #: N/A

eqlab
ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2384941**	Collected Date & Time:	**06/29/2015** 11:45	Date of Report:	7/14/2015
Work Order:	567-01-28	Received Date & Time:	06/29/2015 14:40	Collected By:	RDEJESUS
Delivery Slip:	2015-06053	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	EGARCIA
Folder Number:	209026			Proposal Number:	16158 - 1

Remarks:

Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
Alkalinity - Total	EPA 310.2	241	mg/L as CaCO3	--	10.0	10.0	--	07/08/2015	14:46	LHT	--	--	N/A
Hardness - Total	SM 2340B	245	mg/L as CaCO3	--	0.100	5.000	--	07/06/2015	17:10	CRP	--	--	N/A

SONIA PICHARDO RODRIGUEZ
Químico Licenciado
Estado Libre Asociado de Puerto Rico
LICENCIA NUM. 4538
$1.00 A 1539757

Certified by Laboratory Director

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable
MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
+ = Parameter is not accredited under EQLab's NELAP Certification

ACCREDITED IN ACCORDANCE WITH nelac
The results presented herein meet all NELAC requirements.
Refer to eqlab certification number E87783 at www.eqlab.com

PRDOH Certified
EPA ID PR00014

ENVIRONMENTAL QUALITY LABORATORIES, INC.
60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959
PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

2015 [illegible]053

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: ERTEC | CLIENT ID: 567-01 | W.O. #: 28 | SITE: ROAD # 2, ARECIBO | CLIENT REP: MRS. WANDA MORALES

O. #: 11346 | PWSID #: | FOLDER #: 209026 | PROJECT: PFIZER ARECIBO | EQLAB REP: EGARCIA

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: 2384941-1 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 06/29/15 TIME: 1145 TYPE: Grab	TYPE P/PC COLOR N/A VOLUME 500 PRESERVATIVE Cool 4 °C		Alkalinity
SAMPLE #: 2384941-2 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 06/29/15 TIME: 1145 TYPE: Grab	TYPE P/PC COLOR N/A VOLUME 500 PRESERVATIVE HNO3 pH<2		Hardness - Total, ICP Total Metals: Ca, Mg,
SAMPLE #: MATRIX: SOURCE:	DATE: TIME: TYPE:	TYPE COLOR VOLUME PRESERVATIVE		
SAMPLE #: MATRIX: SOURCE: RAB 06/29/15	DATE: TIME: TYPE:	TYPE COLOR VOLUME PRESERVATIVE		

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	Roberto De Jesus / ERTEC	06/29/15	1145
Fixed in field by:	Roberto De Jesus / ERTEC	06/29/15	1145
Authorized by:	N/A	N/A	
Received by EQLF:			
Released to EQLL by:	~~ROBERTO~~ ERTEC	06/29/15	1440
Received by EQLL:	[illegible]	06/29/15	1440

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

P/HAR

Arrival Temperature: 3.0°C Signature: [illegible]

Eqlab's general terms and conditions on reverse side of this document.

T

ERT
P.O. BOX 195336
SAN JUAN PR 00919-5336

Attn: MRS. WANDA MORALES
Source: **AT-IN**
ROAD # 2, ARECIBO

Project Name: AERATION TOWER
Facility: PFIZER ARECIBO
Description: GROUND WATER - Grab
Client Ref. #: N/A

eqlab
ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2426513**	Collected Date & Time:	**09/23/2015** 14:30	Date of Report:	10/13/2015
Work Order:	567-01-28	Received Date & Time:	09/23/2015 16:36	Collected By:	JRIVERA
Delivery Slip:	2015-09200	Temperature at Arrival:	4.0 °C	Eqlab Rep.:	EGARCIA
Folder Number:	212325			Proposal Number:	16158 - 1

Remarks:

	Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
	Alkalinity - Total	EPA 310.2	239	mg/L as CaCO3	--	10.0	10.0	--	10/05/2015	14:56	LHT	--	--	N/A
+	Hardness - Total	SM 2340B	235	mg/L as CaCO3	--	0.100	5.000	--	10/12/2015	14:29	YDCV	--	--	N/A

SONIA PICHARDO RODRIGUEZ Químico Licenciado Estado Libre Asociado de Puerto Rico LICENCIA NUM. 4538
$1.00 $1.00 A 1548436
Certified by Laboratory Director

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable
MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
+ = Parameter is not accredited under EQLab's NELAP Certification

ACCREDITED IN ACCORDANCE WITH nelac
The results presented herein meet all NELAC requirements.
Refer to eqlab certification number E87783 at www.eqlab.com

PRDOH Certified
EPA ID PR00014

ENVIRONMENTAL QUALITY LABORATORIES, INC.
60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959
PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

IENT NAME: ERTEC | CLIENT ID: 567-01 | W.O. #: 28 | SITE: ROAD # 2, ARECIBO | CLIENT REP: MRS. WANDA MORALES

O. #: 11346 | PWSID #: | FOLDER #: 212325 | PROJECT: PFIZER, ARECIBO | EQLAB REP: EGARCIA

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING		ANALYSIS REQUESTED
SAMPLE #: 2426513-1 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 9/23/15 TIME: 1430 TYPE: Grab	TYPE: P/PC COLOR: N/A VOLUME: 500 PRESERVATIVE: Cool 4 °C			Alkalinity
SAMPLE #: 2426513-2 MATRIX: GROUND WATER SOURCE: AT-IN: ROAD # 2, ARECIBO	DATE: 9/23/15 TIME: 1430 TYPE: Grab	TYPE: P/PC COLOR: N/A VOLUME: 500 PRESERVATIVE: HNO3 pH<2			Hardness - Total, ICP Total Metals: Ca, Mg,
SAMPLE #: MATRIX: SOURCE:	DATE: TIME: TYPE:	TYPE COLOR VOLUME PRESERVATIVE			N/A
SAMPLE #: MATRIX: SOURCE:	DATE: N/A TIME: TYPE:	TYPE COLOR VOLUME PRESERVATIVE		N/A	

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	Josué L Rivera	9/23/15	1430
Fixed in field by:	Josué L Rivera	9/23/15	1430
Authorized by:	N/A	N/A	
Received by EQLF:			
Released to EQLL by:	Josué L Rivera	9/23/15	1636
Received by EQLL:	Diego Ocasio	09/23/15	1636

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

P/KBR

Arrival Temperature: 4.0 °C Signature: [signature]

Eqlab's general terms and conditions on reverse side of this document.

APPENDIX 5

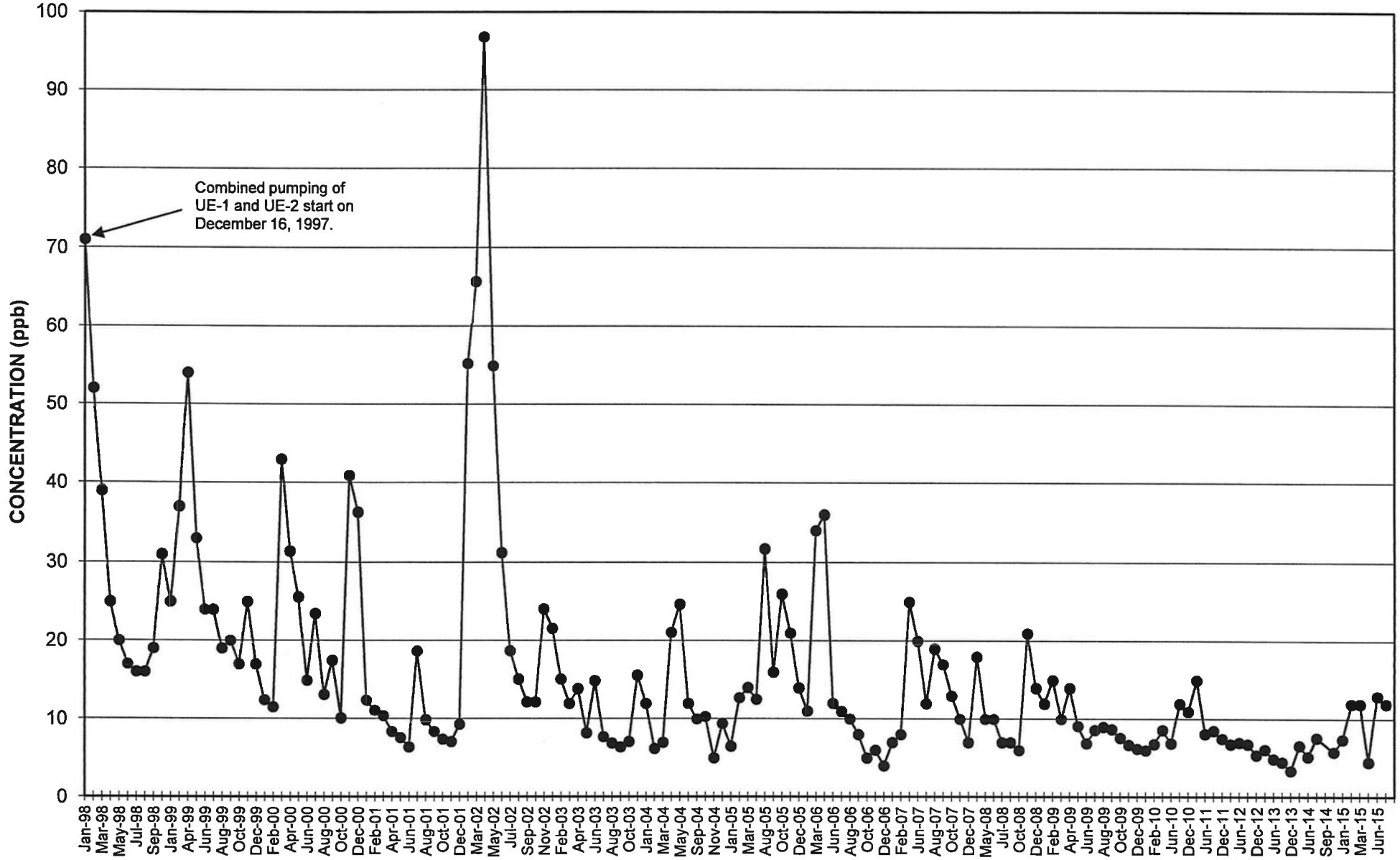
CARBON TETRACHLORIDE CONCENTRATIONS VS. TIME GRAPHS FOR EXTRACTION WELLS, MONITORING WELLS AND INFLUENT AND EFFLUENT OF THE AERATION TOWER TREATMENT SYSTEM

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

ERTEC

CARBON TETRACHLORIDE IN GROUNDWATER
UE-1

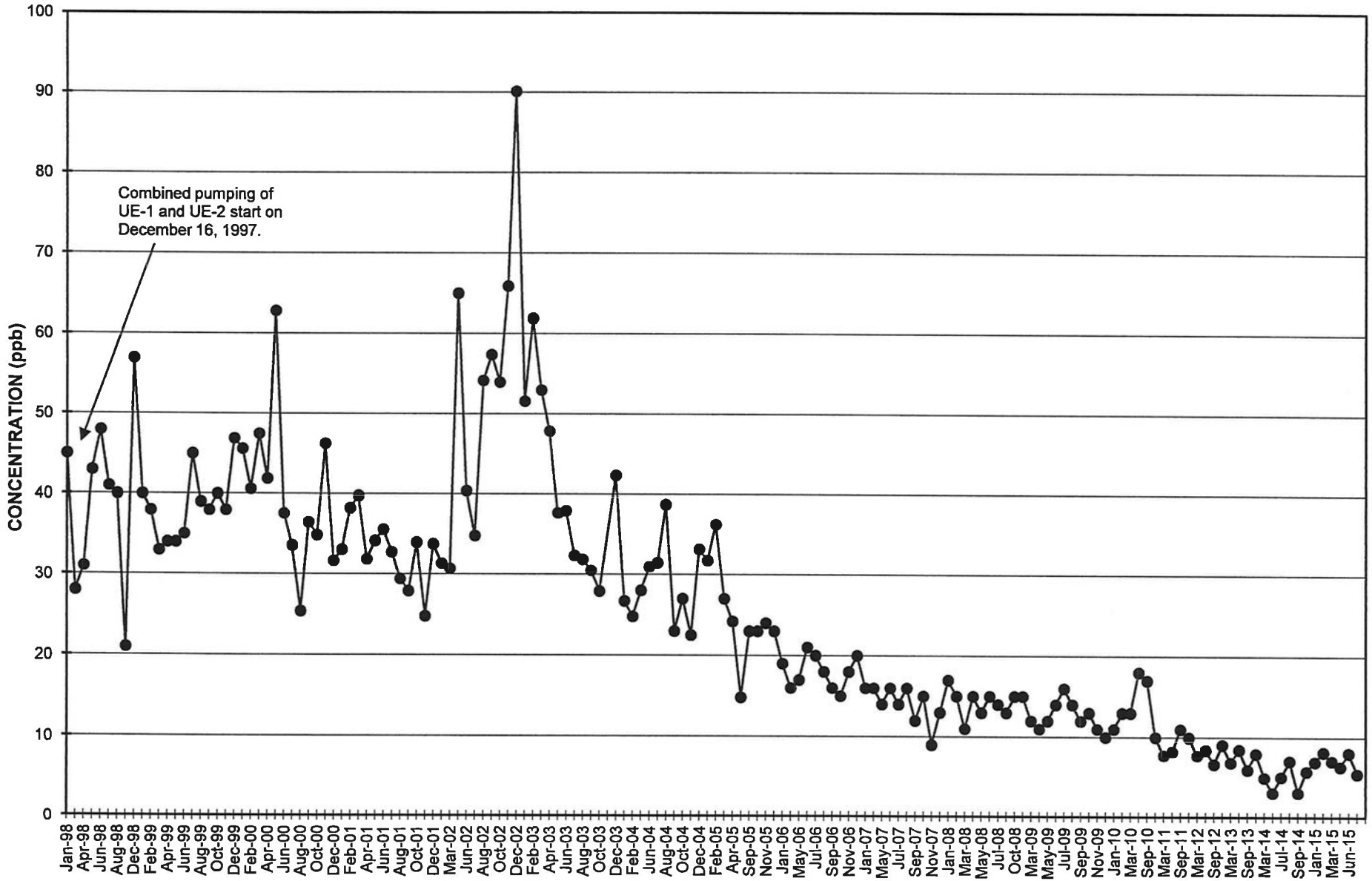


ppb = Parts per billion or micrograms per liter (ug/L).
No samples collected during January, February, March and August 2008 and September 2014 due to well pump malfunctioning and repairs.

D750455c E155384

ERTEC

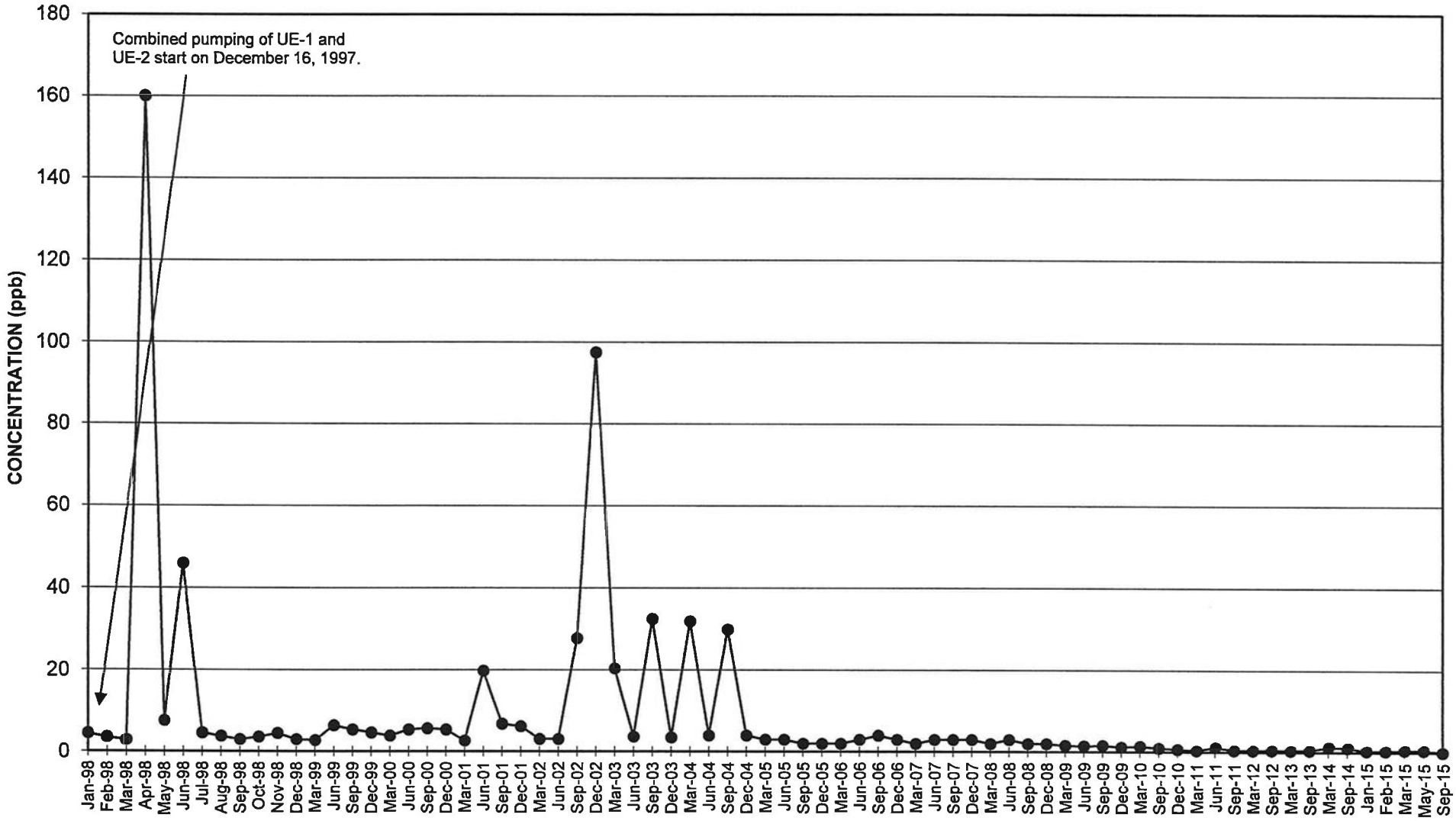
CARBON TETRACHLORIDE IN GROUNDWATER
UE-2



ppb = Parts per billion or micrograms per liter (ug/L).
Extraction well out of service during September and December 2008, and January and February 2009.

ERTEC

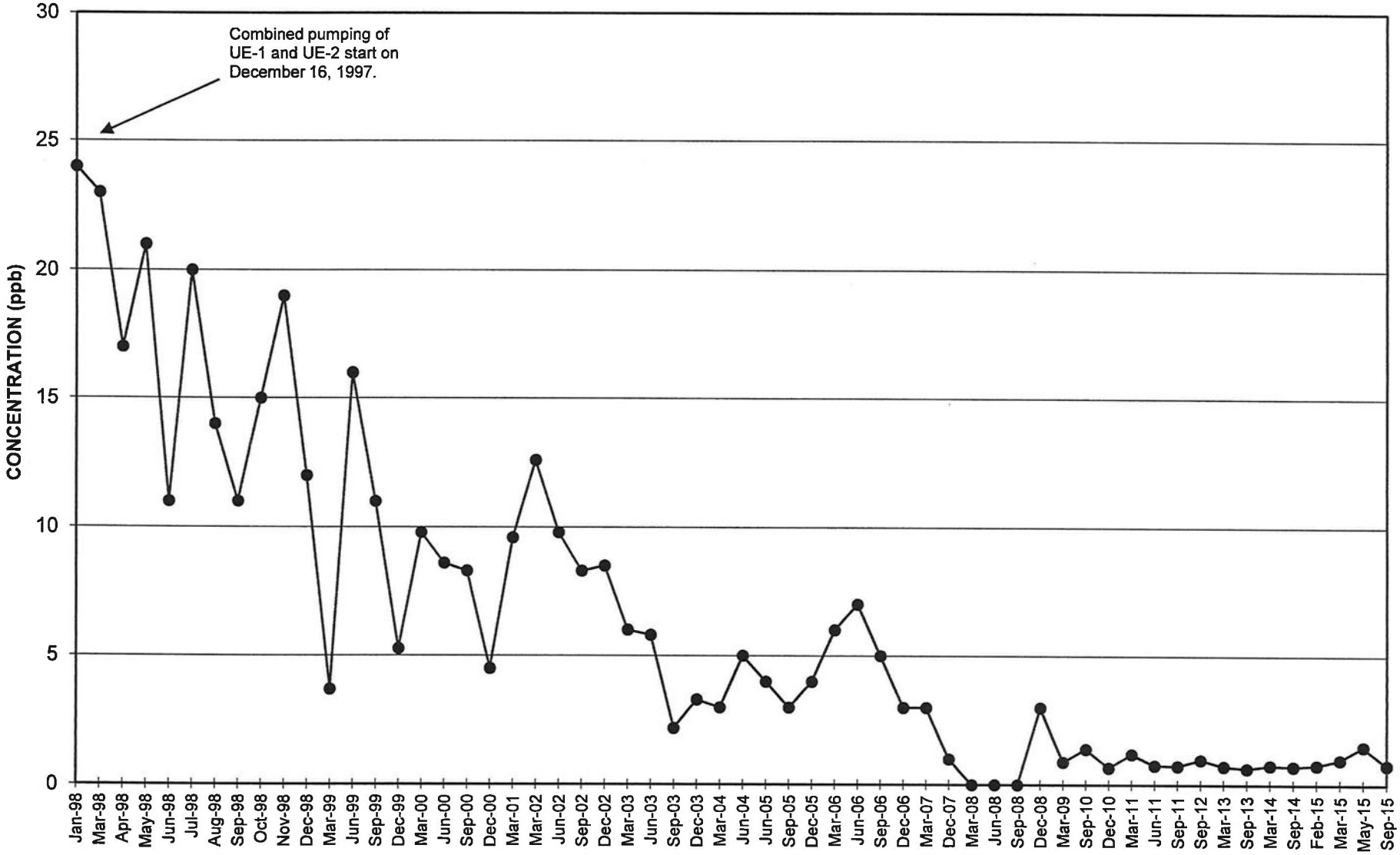
CARBON TETRACHLORIDE IN GROUNDWATER
MW-1



ppb = Parts per billion or micrograms per liter (ug/L)

ERTEC

CARBON TETRACHLORIDE IN GROUNDWATER
MW-18



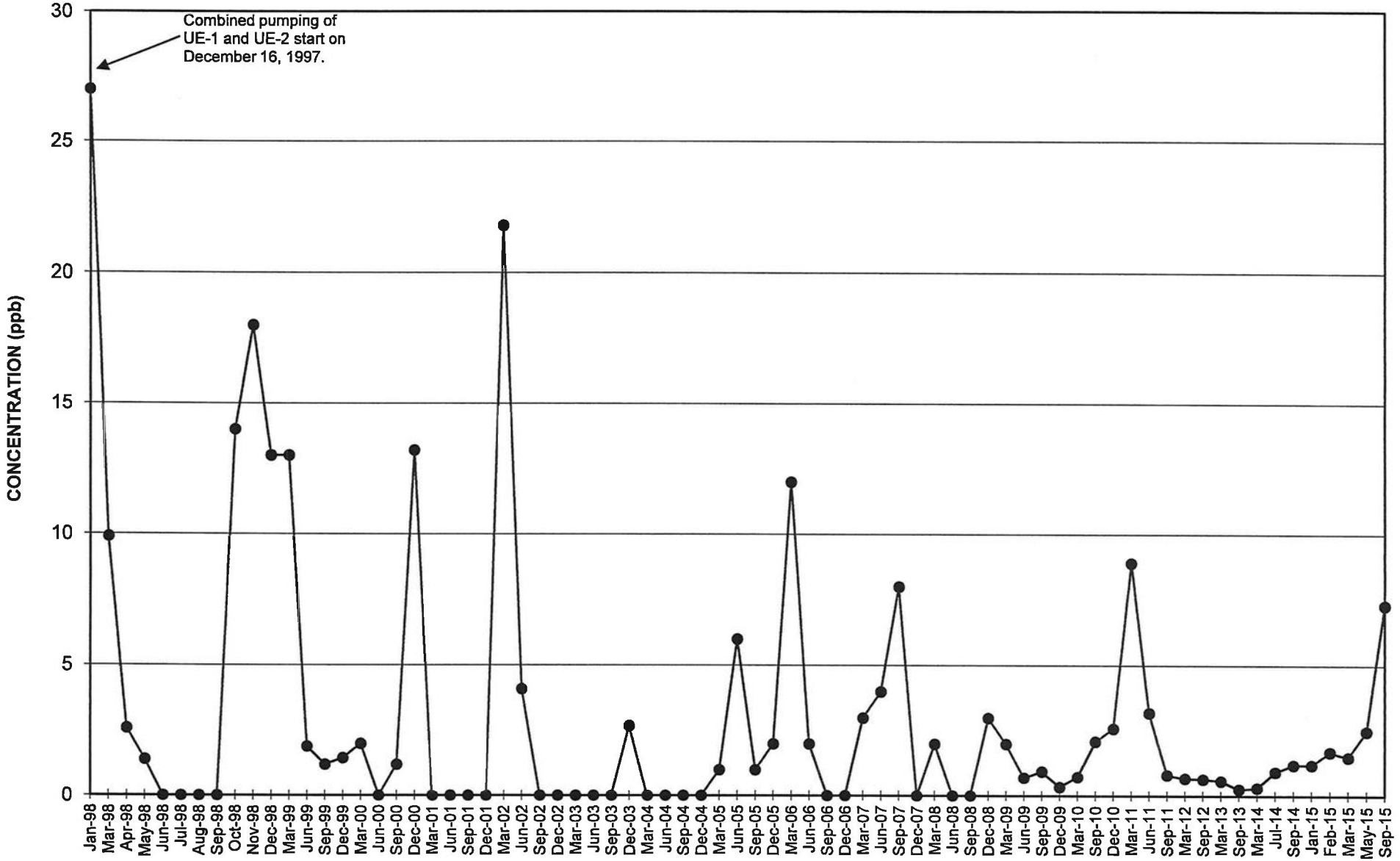
ppb = Parts per billion or micrograms per liter (ug/L).

No samples collected during June, September and December 2001, September and December 2004, March 2005, June and September 2007, June, September and , December 2009, March 2010, and March 2012 due to well pump malfunctioning and repairs.

D750455c E155384

ERTEC

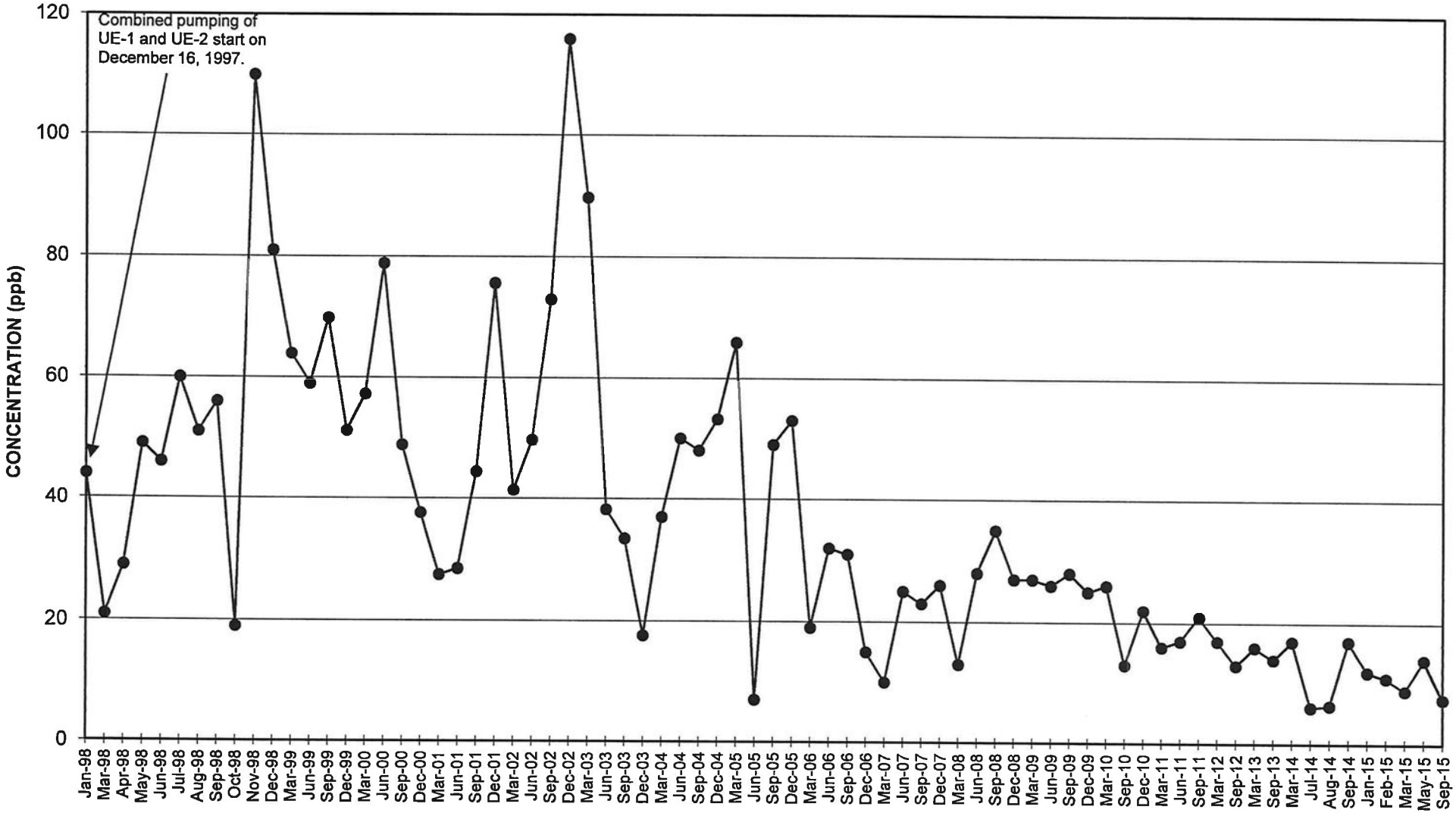
CARBON TETRACHLORIDE IN GROUNDWATER
MW-301B



ppb = Parts per billion or micrograms per liter (ug/L)

ERTEC

CARBON TETRACHLORIDE IN GROUNDWATER
MW-302

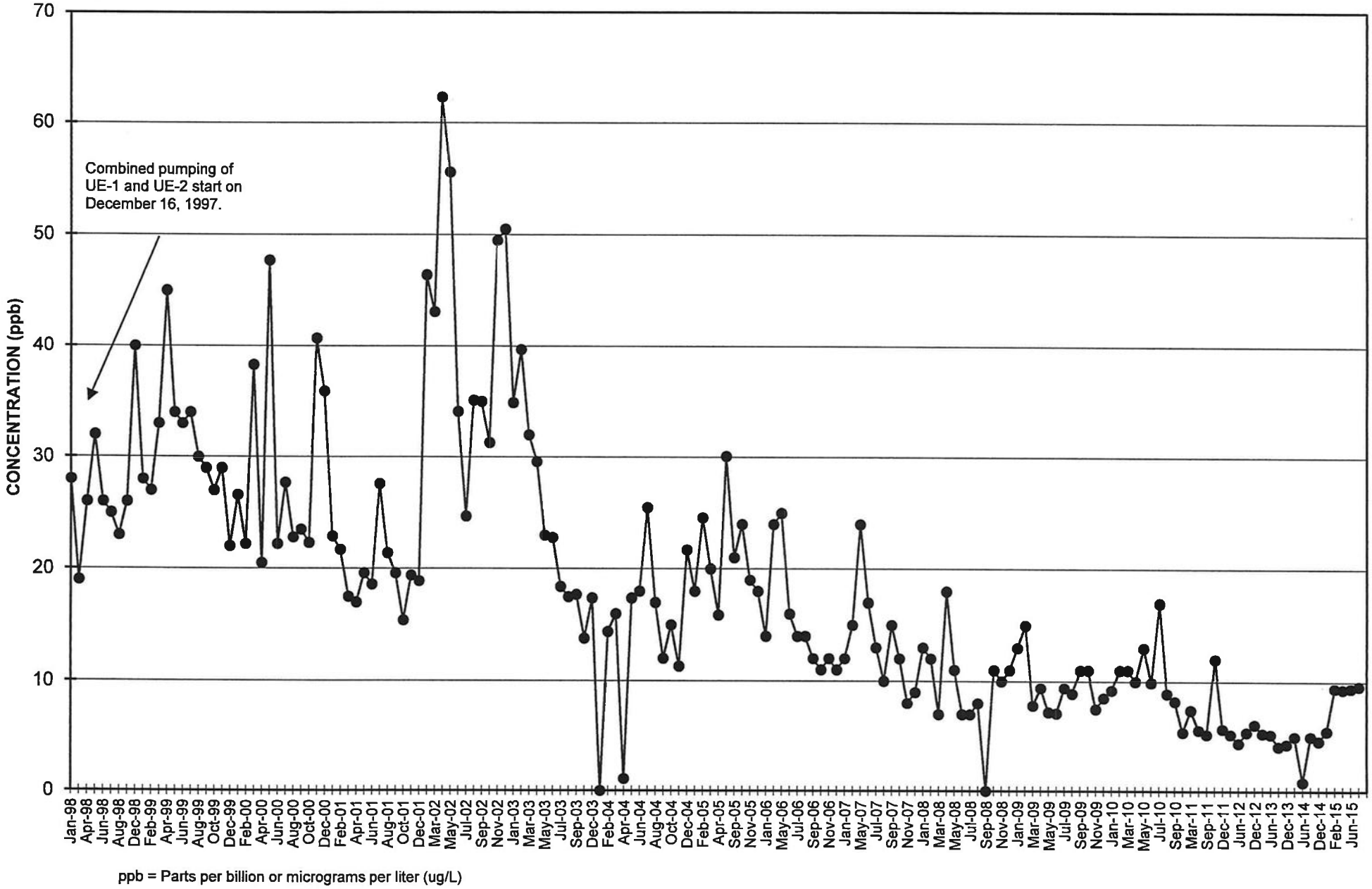


ppb = Parts per billion or micrograms per liter (ug/L)

D750455c E155384

ERTEC

CARBON TETRACHLORIDE IN GROUNDWATER
AT-IN

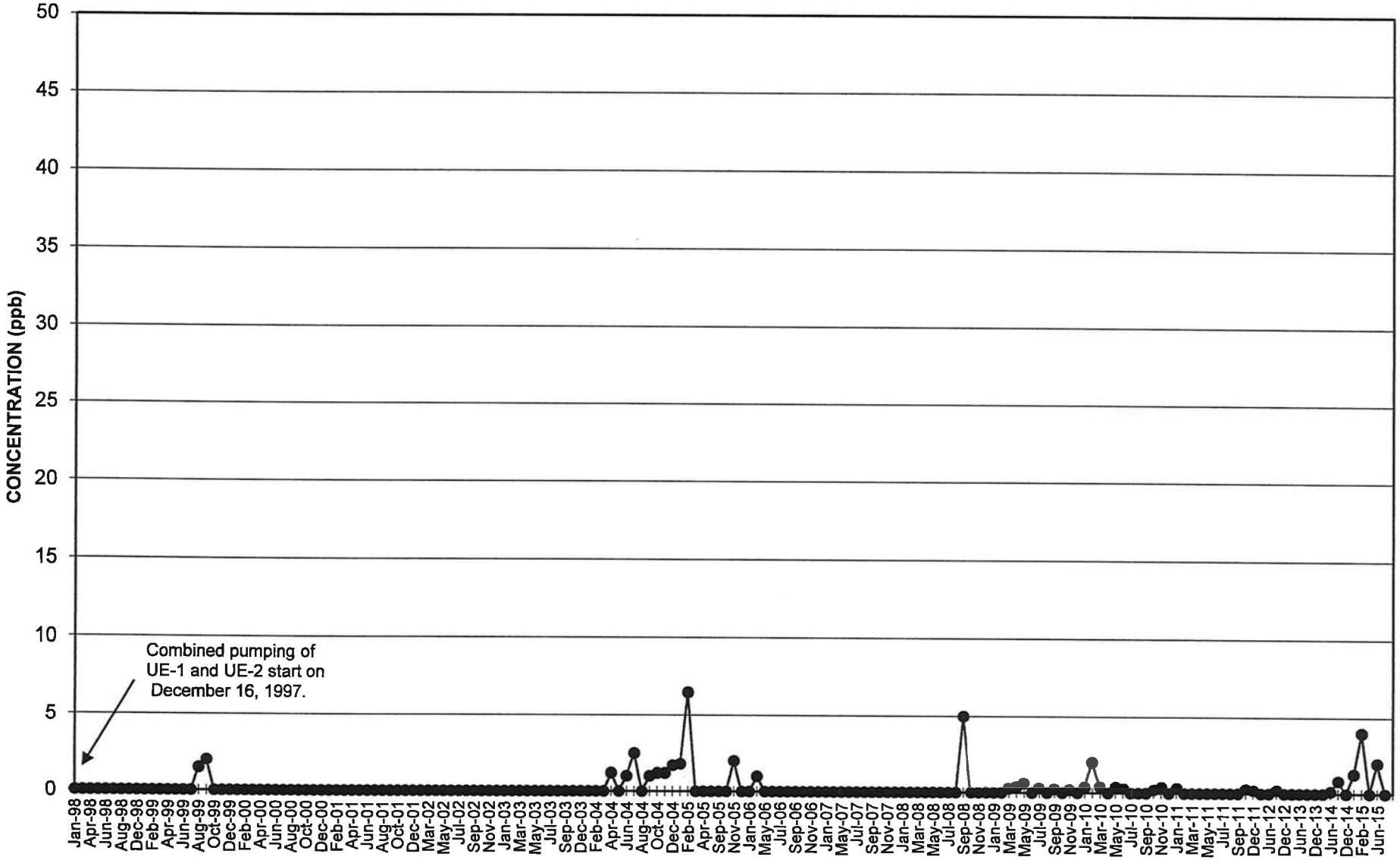


ppb = Parts per billion or micrograms per liter (ug/L)

D750455d E155384

ERTEC

CARBON TETRACHLORIDE IN GROUNDWATER
AT-OUT



ppb = Parts per billion or micrograms per liter (ug/L)

ERTEC

APPENDIX 6

HISTORICAL GROUNDWATER DATA

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 1998
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/98	2/98	3/98[1/]	4/98	5/98	6/98[1/]	7/98	8/98	9/98[1/]	10/98	11/98	12/98[1/]
Artesiano[2/]	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND
Pollera	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Merck[3/]	NS	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS
UE-1	71	52	39	25	20	17	16	16	19	NS	NS	31
UE-2	45	R	28	31	43	48	41	40	21	NS	NS	57
AT-IN	28	R	19	26	32	26	25	23	26	NS	NS	40
AT-OUT	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND
AHR	2.5	R	ND	1.5	1.8	1.6	ND	1.0	ND	ND	ND	ND
MW-1	4.5	3.6	2.9	160	7.6	46	4.6	3.8	3	3.6	4.5	3
MW-5	2.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	3.9	2.2	1.3	1.2	ND	ND	ND	ND	ND	4.9	3.6	2.8
MW-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-9	ND	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10	20	R	1.5	19	29	ND	ND	ND	ND	11	39	12
MW-12	ND	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-16	1.2	R	12	3.0	NS	NS	NS	NS	NS	NS	NS	NS
MW-17	1.6	R	6.3	ND	1.8	1.6	ND	ND	ND	1.0	1.7	1.7
MW-18	24	R	23	17	21	11	20	14	11	15	19	12
MW-22	[4/]	[4/]	3.4	[4/]	[4/]	2.1	[4/]	[4/]	1.5	[4/]	[4/]	4.3
MW-23	[4/]	[4/]	17	[4/]	[4/]	14	[4/]	[4/]	20	[4/]	[4/]	23
MW-101	[4/]	[4/]	1.0	[4/]	[4/]	4.2	[4/]	[4/]	7.3	[4/]	[4/]	7.2
MW-102	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-204	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	4.4	[4/]	[4/]	NS
MW-301B	27	R	9.9	2.6	1.4	ND	ND	ND	ND	14	18	13
MW-302	44	R	21	29	49	46	60	51	56	19	110	81

Notes:

[1/] Quarterly Sampling Event

[2/] Garrochales Artesiano well.

[3/] Former AH Robins well.

[4/] Monitoring wells sampled during quarterly event only.

ND Not detected.

NS Not sampled.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

All units in parts per billion (ppb) [micrograms per liter (ug/L)].

Analytical results reported by Pace Analytical Services.

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 1999
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/99	2/99	3/99[1/]	4/99	5/99	6/99[1/]	7/99	8/99	9/99[1/]	10/99	11/99	12/99[1/]
UE-1	25	NS	37J	54	33	24	24	19	20	17	25	17.0
UE-2	40	38	33J	34	34	35	45	39	38	40	38	46.9
AT-IN	28	27	33J	45	34	33	34	30	29	27	29	22.0
AT-OUT	ND	ND	ND	ND	ND	ND	ND	1.5	2.0	ND	ND	ND
Artesiano[2/]	ND	ND	ND	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND
Pollera	ND	ND	ND	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND
AHR	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	1.0	[3/]	[3/]	ND
MW-1	[3/]	[3/]	2.8J	[3/]	[3/]	6.4	[3/]	[3/]	5.4	[3/]	[3/]	4.68
MW-9	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND
MW-18	[3/]	[3/]	3.7	[3/]	[3/]	16	[3/]	[3/]	11	[3/]	[3/]	5.27
MW-22	[3/]	[3/]	ND	[3/]	[3/]	2.9	[3/]	[3/]	9.3	[3/]	[3/]	5.28
MW-23	[3/]	[3/]	13	[3/]	[3/]	8.7	[3/]	[3/]	8.2	[3/]	[3/]	4.73
MW-101	[3/]	[3/]	12	[3/]	[3/]	8.9	[3/]	[3/]	7.3	[3/]	[3/]	7.02
MW-102	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND
MW-204	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND	[3/]	[3/]	ND
MW-301B	[3/]	[3/]	13	[3/]	[3/]	1.9	[3/]	[3/]	1.2	[3/]	[3/]	1.45
MW-302	[3/]	[3/]	64J	[3/]	[3/]	59	[3/]	[3/]	70	[3/]	[3/]	51.2

Notes:

[1/] Quarterly Sampling Event

[2/] Garrochales Artesiano well.

[3/] Monitoring wells sampled during quarterly event only.

ND Not detected.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

All units in parts per billion (ppb) [micrograms per liter (ug/L)].

Analytical results reported by Pace Analytical Services.

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2000
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/00	2/00	3/00[1/]	4/00	5/00	6/00[1/]	7/00	8/00	9/00[1/]	10/00	11/00	12/00[1/]
UE-1	12.4	11.5	43.0	31.4	25.6	14.9	23.5J	13.1	17.5	10.1	40.9	36.3
UE-2	45.6	40.6	47.5	41.9	62.8	37.6	33.6J	25.4	36.5	34.9	46.3	31.7
AT-IN	26.6	22.2	38.3	20.5	47.7	22.2	27.7J	22.8	23.5	22.3	40.7	35.9
AT-OUT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Artesiano[2/]	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
Pollera	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
AHR	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
MW-1	3/	3/	3.90	3/	3/	5.40	3/	3/	5.70	3/	3/	5.40
MW-9	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
MW-18	3/	3/	9.80	3/	3/	8.60	3/	3/	8.30	3/	3/	4.50
MW-22	3/	3/	1.80	3/	3/	5.00	3/	3/	9.10	3/	3/	2.00
MW-23	3/	3/	4.50	3/	3/	4.40J	3/	3/	7.60	3/	3/	7.50
MW-101	3/	3/	7.40	3/	3/	6.00J	3/	3/	4.10	3/	3/	4.00
MW-102	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
MW-204	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	1.10
MW-301B	3/	3/	2.00	3/	3/	ND	3/	3/	1.20	3/	3/	13.2
MW-302	3/	3/	57.3	3/	3/	78.9	3/	3/	48.8	3/	3/	37.6

Notes:
1/ Quarterly Sampling Event
2/ Garrochales Artesiano well.
3/ Monitoring wells sampled during quarterly event only.
ND Not detected.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Pace Analytical Services.

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2001
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/01	2/01	3/01[1/]	4/01	5/01	6/01[1/]	7/01	8/01	9/01[1/]	10/01	11/01	12/01[1/]
UE-1	12.4	11.1	10.4	8.4	7.6	6.4	18.7	9.9	8.4	7.4	7.1	9.30
UE-2	33.1	38.3	39.8	31.9	34.2	35.6	32.8	29.4	27.9	34.0	24.8	33.8
AT-IN	22.9	21.7	17.5	17	19.6	18.6	27.6	21.4	19.6	15.4	19.4	18.9
AT-OUT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Artesiano[2/]	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
Pollera	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
AHR	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
MW-1	3/	3/	2.7J	3/	3/	19.8	3/	3/	6.8	3/	3/	6.20
MW-9	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
MW-18	3/	3/	9.6J	3/	3/	4/	3/	3/	4/	3/	3/	4/
MW-22	3/	3/	2.8J	3/	3/	5.1U	3/	3/	2.4	3/	3/	6.30
MW-23	3/	3/	9.2J	3/	3/	7.2	3/	3/	4.9J	3/	3/	12.0
MW-101	3/	3/	4.3J	3/	3/	6.1	3/	3/	3.4	3/	3/	4.20
MW-102	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
MW-204	3/	3/	1.0J	3/	3/	ND	3/	3/	1.6	3/	3/	1.60
MW-301B	3/	3/	ND	3/	3/	ND	3/	3/	ND	3/	3/	ND
MW-302	3/	3/	27.5J	3/	3/	28.5J	3/	3/	44.5	3/	3/	75.7J

Notes:

1/ Quarterly Sampling Event

2/ Garrochales Artesiano well.

3/ Monitoring wells sampled during quarterly event only.

4/ Well not sampled due to dedicated pump sampling system malfunction.

ND Not detected.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

All units in parts per billion (ppb) [micrograms per liter (ug/L)].

Analytical results reported by Pace Analytical Services.

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2002
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	2/02[1/]	3/02[2/]	4/02	5/02	6/02[2/]	7/02	8/02	9/02[2/]	10/02	11/02	12/02[2/]
UE-1	55.2	65.7	96.8	54.9	31.2	18.7	15.1	12.2	12.2	24.1	21.6
UE-2	31.4	30.7	[5/]	65.0	40.4	34.8	54.2	57.4	54.0	65.9	90.1J
AT-IN	46.4	43.1	62.3	55.6	34.1	24.7	35.1	35.0	31.3	49.5	50.5
AT-OUT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Artesiano[3/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
Pollera	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
AHR	[4/]	ND	[4/]	[4/]	1.4	[4/]	[4/]	ND	[4/]	[4/]	UJ
MW-1	[4/]	3.1	[4/]	[4/]	3.1	[4/]	[4/]	27.8	[4/]	[4/]	97.6J
MW-9	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	UJ
MW-18	[4/]	12.6	[4/]	[4/]	9.8	[4/]	[4/]	8.3	[4/]	[4/]	8.5J
MW-22	[4/]	2.3	[4/]	[4/]	2.3	[4/]	[4/]	5.3	[4/]	[4/]	4.8J
MW-23	[4/]	16	[4/]	[4/]	3.6	[4/]	[4/]	12.7	[4/]	[4/]	10.2J
MW-101	[4/]	5.1	[4/]	[4/]	4.2	[4/]	[4/]	3.5	[4/]	[4/]	4.7J
MW-102	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	UJ
MW-204	[4/]	ND	[4/]	[4/]	1.6	[4/]	[4/]	ND	[4/]	[4/]	UJ
MW-301B	[4/]	21.8	[4/]	[4/]	4.1	[4/]	[4/]	ND	[4/]	[4/]	UJ
MW-302	[4/]	41.4	[4/]	[4/]	49.7	[4/]	[4/]	73.1	[4/]	[4/]	116J

Notes:

[1/] No sampling conducted on January 2002 due to recharge basin improvement project. Extraction wells were shutdown from December 19, 2001 until January 25, 2002, January 28 through February 8, 2002, February 11 through February 22, 2002, and February 25 through February 28, 2002.

[2/] Quarterly Sampling Event.

[3/] Garrochales Artesiano well.

[4/] Monitoring wells sampled during quarterly event only.

[5/] Extraction well UE-2 out of service due to breakdown of submersible pump motor.

ND Not detected.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit.

All units in parts per billion (ppb) [micrograms per liter (ug/L)].

Analytical results reported by Pace Analytical Services.

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CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2003
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/03	2/03	3/03[1/]	4/03	5/03	6/03[1/]	7/03	8/03	9/03[1/]	10/03	11/03	12/03[1/]
UE-1	[2/]	15.1	12	13.9	8.2	14.9	7.7	6.9	6.4	7.1	[5/]	15.6
UE-2	51.6	61.9	53	47.9	37.7	38	32.4	31.9	30.5	27.9	[5/]	42.4
AT-IN	34.9	39.7	32	29.6	23	22.8	18.4	17.5	17.7	13.8	[5/]	17.4
AT-OUT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	[5/]	ND
Artesiano[3/]	[4/]	[4/]	UJ	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[5/]	ND
Pollera	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[5/]	ND
AHR	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[5/]	ND
MW-1	[4/]	[4/]	20.4	[4/]	[4/]	3.7	[4/]	[4/]	32.6	[4/]	[5/]	3.5
MW-9	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[5/]	ND
MW-18	[4/]	[4/]	6	[4/]	[4/]	5.8	[4/]	[4/]	2.2	[4/]	[5/]	3.3
MW-22	[4/]	[4/]	4.7	[4/]	[4/]	4.3	[4/]	[4/]	ND	[4/]	[5/]	1.0
MW-23	[4/]	[4/]	7.2	[4/]	[4/]	3.4	[4/]	[4/]	6.9	[4/]	[5/]	3.6
MW-101	[4/]	[4/]	6.3	[4/]	[4/]	3.4	[4/]	[4/]	2.2	[4/]	[5/]	1.7
MW-102	[4/]	[4/]	ND	[4/]	[4/]	1.3	[4/]	[4/]	ND	[4/]	[5/]	1.5
MW-204	[4/]	[4/]	ND	[4/]	[4/]	1.2	[4/]	[4/]	2.2	[4/]	[5/]	3.2
MW-301B	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[5/]	2.7
MW-302	[4/]	[4/]	89.7	[4/]	[4/]	38.2	[4/]	[4/]	33.5	[4/]	[5/]	17.6

Notes:

[1/] Quarterly Sampling Event.

[2/] Well out of service.

[3/] Garrochales Artesiano well.

[4/] Monitoring wells sampled during quarterly event only.

[5/] Extraction wells UE-1 and UE-2 out of service due to maintenance activities at aeration tower treatment system.

ND Not detected.

UJ The analyte was not detected above the reported sample quantitation limit.

All units in parts per billion (ppb) [micrograms per liter (ug/L)].

Analytical results reported by Pace Analytical Services.

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2004
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/04	2/04	3/04[1/]	4/04	5/04	6/04[1/]	7/04	8/04	9/04[1/]	10/04	11/04	12/04[1/]
UE-1	12	6.2	7	21.1	24.7	12	[2/]	[2/]	10	10.3	5.0	9.4
UE-2	26.7	24.8	28	[2/]	[2/]	31	31.5J	38.8	23	27.0	22.5	33.2
AT-IN	ND	14.4	16	1.1	17.4	18	25.5	17.0	12	15.0	11.3	21.7
AT-OUT	ND	ND	ND	1.2	ND	1	2.5	1.0U	1	1.2	1.2	1.7
Artesiano[3/]	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
Pollera	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
AHR	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-1	[4/]	[4/]	32	[4/]	[4/]	4	[4/]	[4/]	30J	[4/]	[4/]	4.0
MW-9	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-18	[4/]	[4/]	3	[4/]	[4/]	5	[4/]	[4/]	NS	[4/]	[4/]	NS
MW-22	[4/]	[4/]	2	[4/]	[4/]	3	[4/]	[4/]	2	[4/]	[4/]	1.3
MW-23	[4/]	[4/]	7	[4/]	[4/]	ND	[4/]	[4/]	2	[4/]	[4/]	2.7
MW-101	[4/]	[4/]	3	[4/]	[4/]	2	[4/]	[4/]	3	[4/]	[4/]	[5/]
MW-102	[4/]	[4/]	2	[4/]	[4/]	2	[4/]	[4/]	2	[4/]	[4/]	1.3
MW-204	[4/]	[4/]	3	[4/]	[4/]	4	[4/]	[4/]	3	[4/]	[4/]	3.4
MW-301B	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-302	[4/]	[4/]	37	[4/]	[4/]	50	[4/]	[4/]	48	[4/]	[4/]	53.2

Notes:

[1/] Quarterly Sampling Event.
[2/] Well out of service.
[3/] Garrochales Artesiano well.
[4/] Monitoring wells sampled during quarterly event only.
[5/] No access to well site.
ND Not detected.
NS Not sampled.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Pace Analytical Services.

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2005
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/05	2/05	3/05[1/]	4/05	5/05	6/05[1/]	7/05	8/05	9/05[1/]	10/05	11/05	12/05[1/]
UE-1	6.5	12.7	14	12.8	2/	2/	2/	31.7	16	26	21	14J
UE-2	31.8	36.3	27	24.2	2/	2/	2/	14.8	23	23	24	23J
AT-IN	18	24.6	20	15.9	2/	2/	2/	30.1	21	24	19	18
AT-OUT	1.8J	6.5	ND	ND	2/	2/	2/	ND	ND	ND	2	ND
Artesiano[3/]	4/	4/	ND	4/	4/	ND	4/	4/	ND	4/	4/	ND
Pollera	4/	4/	ND	4/	4/	ND	4/	4/	ND	4/	4/	ND
AHR	4/	4/	ND	4/	4/	ND	4/	4/	ND	4/	4/	ND
MW-1	4/	4/	3	4/	4/	3	4/	4/	2	4/	4/	2
MW-9	4/	4/	ND	4/	4/	ND	4/	4/	ND	4/	4/	ND
MW-18	4/	4/	NS	4/	4/	4	4/	4/	3	4/	4/	4J
MW-22	4/	4/	1	4/	4/	ND	4/	4/	3	4/	4/	1
MW-23	4/	4/	3	4/	4/	2	4/	4/	1	4/	4/	2
MW-101	4/	4/	2	4/	4/	1	4/	4/	2	4/	4/	5/
MW-102	4/	4/	ND	4/	4/	ND	4/	4/	ND	4/	4/	ND
MW-204	4/	4/	ND	4/	4/	ND	4/	4/	ND	4/	4/	ND
MW-301B	4/	4/	1	4/	4/	6	4/	4/	1	4/	4/	2
MW-302	4/	4/	66	4/	4/	7	4/	4/	49	4/	4/	53J

Notes:
1/ Quarterly Sampling Event.
2/ Well out of service.
3/ Garrochales Artesiano well.
4/ Monitoring wells sampled during quarterly event only.
5/ No access to well site.
ND Not detected.
NS Not sampled.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte In the sample.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Pace Analytical Services.

ERTEC

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2006
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/06	2/06	3/06[1/]	4/06	5/06	6/06[1/]	7/06	8/06	9/06[1/]	10/06	11/06	12/06[1/]
UE-1	11	[2/]	34J	[2/]	36	12	11	10	8	5	6	4
UE-2	19	[2/]	16J	[2/]	17	21	20	18	16	15	18	20
AT-IN	14	[2/]	24J	[2/]	25	16	14	14	12	11	12	11.2
AT-OUT	ND	[2/]	1J	[2/]	ND	ND	ND	ND	ND	ND	ND	ND
Artesiano[3/]	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
Pollera	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
AHR	[4/]	[4/]	1J	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-1	[4/]	[4/]	2J	[4/]	[4/]	3	[4/]	[4/]	4	[4/]	[4/]	3
MW-9	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-18	[4/]	[4/]	6J	[4/]	[4/]	7	[4/]	[4/]	5	[4/]	[4/]	3J
MW-22	[4/]	[4/]	1	[4/]	[4/]	ND	[4/]	[4/]	1	[4/]	[4/]	1
MW-23	[4/]	[4/]	3	[4/]	[4/]	4	[4/]	[4/]	3	[4/]	[4/]	2
MW-101	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]
MW-102	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-204	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	1	[4/]	[4/]	ND
MW-301B	[4/]	[4/]	12J	[4/]	[4/]	2	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-302	[4/]	[4/]	19J	[4/]	[4/]	32	[4/]	[4/]	31	[4/]	[4/]	15

Notes:

[1/] Quarterly Sampling Event.
[2/] Well out of service.
[3/] Garrochales Artesiano well.
[4/] Monitoring wells sampled during quarterly event only.
[5/] No access to well site.
ND Not detected.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte In the sample.

All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Pace Analytical Services.

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CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2007
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/07	2/07	3/07[1/]	4/07	5/07	6/07[1/]	7/07	8/07	9/07[1/]	10/07	11/07	12/07[1/]
UE-1	7	8	[2/]	[2/]	25	20	12	19	17	13	10	7
UE-2	16	16	[2/]	[2/]	14	16	14	16	12	15	9	13
AT-IN	12	15	[2/]	[2/]	24	17	13	10	15	12	8	9
AT-OUT	ND	ND	[2/]	[2/]	ND	ND	ND	ND	ND	ND	ND	ND
Artesiano[3/]	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
Pollera	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
AHR	[4/]	[4/]	ND	[4/]	[4/]	1	[4/]	[4/]	1	[4/]	[4/]	ND
MW-1	[4/]	[4/]	2	[4/]	[4/]	3	[4/]	[4/]	3	[4/]	[4/]	3
MW-9	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-18	[4/]	[4/]	3	[4/]	[4/]	[6/]	[4/]	[4/]	[6/]	[4/]	[4/]	1
MW-22	[4/]	[4/]	1	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-23	[4/]	[4/]	2	[4/]	[4/]	2	[4/]	[4/]	1	[4/]	[4/]	ND
MW-101	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]
MW-102	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-204	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-301B	[4/]	[4/]	3	[4/]	[4/]	4	[4/]	[4/]	8	[4/]	[4/]	ND
MW-302	[4/]	[4/]	10	[4/]	[4/]	25	[4/]	[4/]	23	[4/]	[4/]	26

Notes:
[1/] Quarterly Sampling Event.
[2/] Aeration tower out of service.
[3/] Garrochales Artesiano well.
[4/] Monitoring wells sampled during quarterly event only.
[5/] No access to well site.
[6/] Not sampled due to submersible pump malfunctioning.
ND Not detected.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Pace Analytical Services.

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CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2008
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/08	2/08	3/08[1/]	4/08	5/08	6/08[1/]	7/08	8/08	9/08[1/]	10/08	11/08	12/08[1/]
UE-1	[2/]	[2/]	[2/]	18	10	10	7	[2/]	7	6	21	14
UE-2	17	15	11	15	13	15	14	13	[2/]	15	15	[6/]
AT-IN	13	12	7	18	11	7	7	8	ND	11	10	11
AT-OUT	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	ND
Artesiano[3/]	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
Pollera	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
AHR	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-1	[4/]	[4/]	2	[4/]	[4/]	3	[4/]	[4/]	2	[4/]	[4/]	2
MW-9	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-18	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	UJ	[4/]	[4/]	3
MW-22	[4/]	[4/]	1	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-23	[4/]	[4/]	2	[4/]	[4/]	2	[4/]	[4/]	1	[4/]	[4/]	2J
MW-101	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]
MW-102	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-204	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-301B	[4/]	[4/]	2	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	3
MW-302	[4/]	[4/]	13	[4/]	[4/]	28	[4/]	[4/]	35	[4/]	[4/]	27

Notes:
[1/] Quarterly Sampling Event.
[2/] Well out of service.
[3/] Garrochales Artesiano well.
[4/] Monitoring wells sampled during quarterly event only.
[5/] No access to well site.
ND Not detected.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ The analyte was not detected above the reported sample Quantitation limit.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Pace Analytical Services.

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2009
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/09	2/09	3/09[1/]	4/09	5/09	6/09[1/]	7/09	8/09	9/09[1/]	10/09	11/09	12/09[1/]
UE-1	12	15	10	14	9.1	6.9	8.6	9.0	8.7	7.6	6.7	6.2
UE-2	[2/]	[2/]	12	11	12	14	16	14	12	13	11	10
AT-IN	13	15	7.8	9.4	7.2	7.1	9.4	8.9	11	11	7.5	8.5
AT-OUT	ND	ND	0.27J	0.37J	0.62	ND	0.29J	ND	0.24J	ND	0.20J	ND
Artesiano[3/]	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
Pollera	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
AHR	[4/]	[4/]	0.43J	[4/]	[4/]	0.24J	[4/]	[4/]	0.28J	[4/]	[4/]	0.29J
MW-1	[4/]	[4/]	1.6	[4/]	[4/]	1.5	[4/]	[4/]	1.6	[4/]	[4/]	1.2
MW-9	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	UJ	[4/]	[4/]	ND
MW-18	[4/]	[4/]	0.89	[4/]	[4/]	[6/]	[4/]	[4/]	[6/]	[4/]	[4/]	[6/]
MW-22	[4/]	[4/]	0.73	[4/]	[4/]	0.51	[4/]	[4/]	0.87	[4/]	[4/]	0.51
MW-23	[4/]	[4/]	1.1	[4/]	[4/]	0.96	[4/]	[4/]	1.1	[4/]	[4/]	0.94
MW-101	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]	[4/]	[4/]	[5/]
MW-102	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND	[4/]	[4/]	ND
MW-204	[4/]	[4/]	0.62	[4/]	[4/]	ND	[4/]	[4/]	0.80	[4/]	[4/]	ND
MW-301B	[4/]	[4/]	2	[4/]	[4/]	0.70	[4/]	[4/]	0.94	[4/]	[4/]	0.34J
MW-302	[4/]	[4/]	27	[4/]	[4/]	26	[4/]	[4/]	28	[4/]	[4/]	25

Notes:

[1/] Quarterly Sampling Event.
[2/] Well out of service.
[3/] Garrochales Artesiano well.
[4/] Monitoring wells sampled during quarterly event only.
[5/] No access to well site.
[6/] No sample collected due to dedicated submersible pump malfunctioning.
ND Not detected.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Test America Burlington.

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CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2010
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/10	2/10	3/10[1/]	6/10[1/]	9/10[4/]	10/10	11/10	12/10[4/]
UE-1	6	6.8	8.6	6.9	12	5/	5/	11
UE-2	11	13	13	18	17	5/	5/	10
AT-IN	9.2	11	11	9.9	8.2	5/	5/	5.4
AT-OUT	0.38J	2	0.40J	0.31J	ND	0.23J	0.42J	0.50U
MW-1	2/	2/	1.4	2/	0.96	2/	2/	0.68
MW-6	2/	2/	ND	2/	ND	2/	2/	0.48J
MW-9	2/	2/	ND	2/	ND	2/	2/	0.50U
MW-12	2/	2/	ND	2/	ND	2/	2/	0.50U
MW-17			0.21J		ND			0.39J
MW-18	2/	2/	3/	2/	1.4	2/	2/	0.67
MW-301B	2/	2/	0.73	2/	2.1	2/	2/	2.6
MW-302	2/	2/	26	2/	13	2/	2/	22

Notes:
1/ Semi-annual sampling event.
2/ Monitoring wells sampled during semi-annual and quarterly events only.
3/ No sample collected due to dedicated submersible pump malfunctioning.
4/ Quarterly sampling event.
5/ Extraction wells and influent of aeration tower sampled during quarterly event.
ND Not detected.
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Test America Burlington for January, February and March 2010, and Test America Savannah from April through December 2010.

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CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2011
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/11[1/]	2/11[1/]	3/11[3/]	4/11[1/]	5/11[1/]	6/11[3/]	7/11[1/]	8/11[1/]	9/11[3/]	10/11[1/]	12/11[6/]
UE-1	2/	2/	**15**	2/	2/	**8.1**	2/	2/	**8.5**	2/	**7.5**
UE-2	2/	2/	**7.8**	2/	2/	**8.3**	2/	2/	**11**	2/	**10**
AT-IN	2/	2/	**7.4**	2/	2/	**5.6**	2/	2/	**5.2**	**12**	**5.7**
AT-OUT	**0.35J**	ND	**0.50U**	ND	ND	1.0U	ND	ND	1.0U	**0.30J**	**0.22J**
MW-1	2/	2/	**0.40J**	2/	2/	**1.2**	2/	2/	**0.45J**	2/	7/
MW-6	2/	2/	**2.3**	2/	2/	1.0U	2/	2/	**0.34J**	2/	7/
MW-9	2/	2/	0.50U	2/	2/	4/	2/	2/	5/	2/	7/
MW-12	2/	2/	0.50U	2/	2/	1.0U	2/	2/	1.0U	2/	7/
MW-17	2/	2/	**0.24J**	2/	2/	**0.32J**	2/	2/	1.0U	2/	7/
MW-18	2/	2/	**1.2**	2/	2/	**0.76J**	2/	2/	**0.74J**	2/	7/
MW-301B	2/	2/	**8.9**	2/	2/	**3.2**	2/	2/	**0.81J**	2/	7/
MW-302	2/	2/	**16**	2/	2/	**17**	2/	2/	**21**	2/	7/

Notes:
1/ Monthly sampling event.
2/ Extraction wells, monitoring wells and aeration tower influent sampled during quarterly events only.
3/ Quarterly sampling event.
4/ Well not sampled due to no access to well area.
5/ Well not found: search performed on September 7 and 8, 2011. One protective post and broken concrete pad pieces found on September 8, 2011. Well PVC pipe not found.
6/ Quarterly sampling event in accordance to EPA-approved monitoring plan after 1-year pumping step reduction period (August 2010 to September 2011).
7/ Monitoring wells sampled during semi-annual events in accordance to EPA-approved monitoring plan after 1-year pumping step reduction period (August 2010 to September 2011).
ND Not detected.
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Test America Savannah from January thru May 2011 following EPA Method 524.2.
Analytical results reported by Test America Burlington from June thru December 2011 following EPA SW-846 Method 8260B.

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2012
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	3/12[1/]	6/12[3/]	9/12[1/]	12/12[3/]
UE-1	6.8	7.0	6.8	5.4
UE-2	7.8	8.5	6.7	9.1
AT-IN	5.2	4.4	5.4	6.1
AT-OUT	1.0U	ND	0.23J	1.0U
MW-1	0.42J	[4/]	0.47J	[4/]
MW-6	1.0U	[4/]	0.24J	[4/]
MW-12	1.0U	[4/]	1.0U	[4/]
MW-17	1.0U	[4/]	1.0U	[4/]
MW-18	[2/]	[4/]	0.98J	[4/]
MW-301B	0.68J	[4/]	0.65J	[4/]
MW-302	17	[4/]	13	[4/]

Notes:
[1/] Semi-annual sampling event.
[2/] Well not sampled due to submersible pump malfunction.
[3/] Quarterly sampling event.
[4/] Monitoring wells sampled during semi-annual events only in accordance to EPA-approved monitoring plan after 1-year pumping step reduction period (August 2010 to September 2011).
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
ND Not detected.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Test America Burlington following EPA SW-846 Method 8260B.

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2013
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	3/13[1/]	6/13[2/]	9/13[1/]	12/13[2/]
UE-1	6.1	4.9	4.5	3.4
UE-2	6.9	8.5	6.0	8.0
AT-IN	5.3	5.2	4.1	4.3
AT-OUT	ND	1.0U	1.0U	1.0U
MW-1	0.41J	[3/]	0.45J	[3/]
MW-6	0.33J	[3/]	1.0U	[3/]
MW-12	ND	[3/]	1.0U	[3/]
MW-17	ND	[3/]	1.0U	[3/]
MW-18	0.73J	[3/]	0.64J	[3/]
MW-301B	0.58J	[3/]	0.26J	[3/]
MW-302	16	[3/]	14	[3/]

Notes:
[1/] Semi-annual sampling event.
[2/] Quarterly sampling event.
[3/] Monitoring wells sampled during semi-annual events only in accordance to EPA-approved monitoring plan after 1-year pumping step reduction period (August 2010 to September 2011).
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
ND Not detected.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Test America Burlington following EPA SW-846 Method 8260B.

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CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2014
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	3/14[1/]	6/14[2/]	7/14[4/]	8/14[4/]	9/14[1/]	12/14[2/]
UE-1	6.6	5.2	7.6	[5]	[5/]	5.8
UE-2	5.0	3.1	5.1	7.1	3.1	5.8
AT-IN	5.0	0.83J	[4/]	[4/]	5.0	4.6
AT-OUT	1.0U	0.15J	[4/]	[4/]	0.85J	1.0U
MW-1	1.3	[3/]	[4/]	[4/]	1.1	[3/]
MW-6	1.0U	[3/]	[4/]	[4/]	0.30J	[3/]
MW-9	1.0U	[3/]	[4/]	[4/]	1.0U	[3/]
MW-12	1.0U	[3/]	[4/]	[4/]	1.0U	[3/]
MW-17	1.0U	[3/]	[4/]	[4/]	0.13J	[3/]
MW-18	0.76J	[3/]	[4/]	[4/]	0.72J	[3/]
MW-301B	0.31J	[3/]	0.93J	[4/]	1.2	[3/]
MW-302	17	[3/]	6.1	6.4	17	[3/]

Notes:
1/ Semi-annual sampling event.
2/ Quarterly sampling event.
3/ Monitoring wells sampled during semi-annual events only in accordance to EPA-approved monitoring plan after 1-year pumping step reduction period (August 2010 to September 2011).
4/ Additional sampling events for Step #1 (Short-Term Pumping/Step-Reduction Test).
5/ Extraction well UE-1 out of service due to pump motor failure.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Test America Burlington following EPA SW-846 Method 8260B.

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CARBON TETRACHLORIDE CONCENTRATIONS IN GROUND WATER - 2015
SEMI-ANNUAL MONITORING PROGRESS REPORT – APRIL TO SEPTEMBER 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

WELL ID.	1/13 & 1/14/2015	1/26 & 1/27/2015	2/23 & 2/24/2015	3/10 & 3/11/2015	5/20 & 5/21/2015	5/27 & 5/28/2015	6/15[2/]	9/15
	200 gpm/well; 400gpm combined		100 gpm/well; 200gpm combined		No Pumping (1st. week)	No pumping (2nd week)	250 gpm combined	250 gpm combined
UE-1	6.9	7.4	12	12	Not sampled	4.5J	13	12
UE-2	7.0	6.7	8.2	7.1	2.1	6.4J	8.1	5.5
AT-IN	4.3	5.5	9.4	9.3			9.4	9.6
AT-OUT	1.3	1.2	4.0	1.0U			2.0	1.0U
MW-1	0.34J	0.30J	0.32J	0.53J	0.50J	1.0UJ	[3/]	1.0U
MW-6	[1/]	[1/]	1.7	2.5	0.78J	1.7J	[3/]	4.7
MW-9	[1/]	[1/]	1.0U	1.0U	R	1.0UJ	[3/]	1.0U
MW-12	1.0U	1.0U	1.0U	1.0U	R	1.0UJ	[3/]	1.0U
MW-17	0.29J	0.26J	0.45J	0.50J	0.40J	0.97J	[3/]	1.8
MW-18	[1/]	[1/]	0.77J	0.98J	1.5	1.5J	[3/]	0.77J
MW-301B	0.96J	1.2	1.7	1.5	2.5	2.5J	[3/]	7.3
MW-302	12	11	11	8.9	10	14J	[3/]	7.5

Notes:

[1/] Monitoring well not included as part of groundwater sampling network during pumping reduction test.
[2/] Quarterly sampling event.
[3/] Monitoring wells sampled during semi-annual events only in accordance to EPA-approved monitoring plan after 1-year pumping step reduction period (August 2010 to September 2011).
J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
All units in parts per billion (ppb) [micrograms per liter (ug/L)].
Analytical results reported by Test America Burlington following EPA SW-846 Method 8260B.

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APPENDIX 7

CARBON TETRACHLORIDE EXTRACTION IN POUNDS PER MONTH

SEMI-ANNUAL MONITORING PROGRESS REPORT
APRIL TO SEPTEMBER 2015
WATER PURIFICATION SYSTEM OPERATION AND MAINTENANCE
PFIZER PHARMACEUTICALS LLC - (FORMER PHARMACIA & UPJOHN)
ARECIBO, PUERTO RICO

ERTEC JOB NO. E155384

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CARBON TETRACHLORIDE EXTRACTION IN POUNDS PER MONTH YEARS 2010 TO 2015
SEMI-ANNUAL MONITORING PROGRESS REPORT - OCTOBER 2014 TO MARCH 2015
PFIZER PHARMACEUTICALS LLC (FORMER PHARMACIA UPJOHN)
ARECIBO, PUERTO RICO

MONTH	UE-1			UE-2		
	Extraction Volume (gal/mo)	CCl_4 (ug/L)	CCl_4 Extraction (lbs)	Extraction Volume (gal/mo)	CCl_4 (ug/L)	CCl_4 Extraction (lbs)
Jan-10	18,314,700	6	0.92	18,685,672	11	1.72
Feb-10	12,722,422	6.8	0.72	12,939,511	13	1.40
Mar-10	18,177,887	8.6	1.31	18,710,866	13	2.03
Jun-10	17,930,100	6.9	1.03	18,435,120	18	2.77
Sep-10 1/	13,012,816	12	1.30	13,039,573	17	1.85
Dec-10	13,345,467	11	1.23	13,335,151	10	1.11
Mar-11	13,336,050	15	1.67	13,345,300	7.8	0.87
Jun-11	11,773,400	8.1	0.80	11,680,900	8.3	0.81
Sep-11	13,017,709	8.5	0.92	12,554,875	11	1.15
Dec-11	13,549,592	7.5	0.85	13,692,775	10	1.14
Mar-12	13,464,713	6.8	0.76	13,261,531	7.8	0.86
Jun-12	12,774,182	7	0.75	12,701,251	8.5	0.90
Sep-12	13,366,700	6.8	0.76	12,829,825	6.7	0.72
Dec-12	13,660,900	5.4	0.62	13,497,900	9.1	1.03
Mar-13	12,943,700	6.1	0.66	12,772,900	6.9	0.74
Jun-13	12,899,900	4.9	0.53	12,736,100	8.5	0.90
Sep-13	13,539,150	4.5	0.51	12,980,800	6	0.65
Dec-13	13,262,200	3.4	0.38	13,519,100	8	0.90
Mar-14	13,946,800	6.6	0.77	13,517,300	5	0.56
Jun-14	13,025,500	5.2	0.57	13,013,500	3.1	0.34
Jul-14 2/	18,477,100	7.6	1.17	2,467,000	5.1	2/
Aug-14	3/			22,495,100	7.1	1.33
Sep-14	3/			21,457,100	3.1	0.56
Dec-14 4/	13,008,600	5.8	0.63	12,890,700	5.8	0.62
Jan-15	8,939,500	7.4	0.55	8,915,500	7	0.52
Feb-15 5/	5,182,100	12	0.52	5,187,800	8.2	0.36
Mar-15 6/	10,002,200	12	<1	9,934,500	7.1	<0.59
Jun-15 7/	7,991,200	13	0.87	2,493,500	8.1	0.20
Sep-15	6,505,700	12	0.65	4,457,800	5.5	0.20

Notes:

CCl_4	Carbon tetrachloride.
ug/L	Micrograms per liter.
gal/mo	gallons per month
lbs	Pounds.
1/	Pumping rate reduction began on August 10, 2010 to 310-315 gallons per minute per extraction well.
2/	Extraction well UE-2 out of service on July 6, 2014 due to damaged Variable Frequency Drive (VDF) system. Pumping rate increase at extraction well UE-1 on July 10, 2014 to 500 gpm.
3/	Extraction well UE-1 out of service on July 30, 2014 due to pump motor failure. Extraction well UE-2 back online on July 30, 2014 at 504 gpm. Extraction well UE-1 back online on October 7, 2014.
4/	Step #1 pumping reduction from 300 to 200 gpm per well on December 29, 2014.
5/	Step #2 pumping reduction from 200 to 100 gpm per well on February 9, 2015.
6/	Extraction rates returned to 300 gpm per well on March 12, 2015 in accordance with approved pumping reduction test procedures until EPA approval of Step #3.
7/	Extraction rates 250 gpm combined (150 gpm in UE-1 and 100 gpm in UE-2) on June 11, 2015.

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